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pensions & investments

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Assets of Top 1,000 exceed $422 billion

Top 100 public, private plans have assets of $270 billion; account for 64% of total

By Michael Clowes
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NEW YORK—The assets of the 1,000 largest employe benefit systems or sponsors total more than $422 billion, a *Pensions & Investments* survey shows.

The assets of the Top 1,000 sponsors increased more than 19% over the assets revealed in the 1979 survey (*P&I* Jan. 1, 1979) with the smaller funds growing faster than the larger ones.

While the assets of the 100 largest funds grew 17.2% during the year, the assets of the next 900 funds grew 21.7%.

However, the assets of the 100 largest employe benefit systems, which include corporate, state and local government and union plans, were 78% greater than the assets of the next 900 plans.

The Top 100 plans had assets (as of Sept. 30, 1979), of $270.1 billion, up from $230 billion at Sept. 30, 1978, while the next 900 plans had assets of $152.8 billion compared with $124.6 billion last year.

The assets of the Top 100 plans accounted for 64% of the total assets of $422 billion of the Top 1,000 employe benefit systems.

The $422 billion of the Top 1,000 is more than the total worldwide assets of the top 40 Fortune 500 companies.

Indeed, the total assets of the Top 100 plans is greater than the worldwide assets of the 11 largest Fortune 500 companies and larger than the shareholders' equity of the top 60.

Of the Top 100 sponsors, 56 were corporate, 40 were state and/or local government, two were union, one was the United Nations staff fund, and one was the Teachers Insurance and Annuity Assn./College Retirement Equities Fund (TIAA/CREF).

While there were more corporate funds in the Top 100, the 40 state and local government funds accounted for the largest share of the assets.

The state and local government funds had assets of $129.8 billion, up 11.2% compared with last year's survey.

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During the year ended Sept. 30, 1979, the 40 state and municipal systems in the Top 100 received contributions from the sponsoring bodies totaling more than $13 billion, and they paid benefits to retired workers totaling $8 billion.

Of the 40, 35 manage at least part of the assets internally, and 23 manage all of the assets internally.

The 17 who use some outside management help use an average of fewer than five outside managers each, despite the large size of the asset pools.

Indeed, the average fund among the state and local systems in the Top 100 has assets of $3.1 billion.

The 56 corporate employe benefit systems in the Top 100, on the other hand, have total assets of $119.1 billion, up more than 25% from last year.

The sponsors of these systems contributed more than $11.7 billion to them during the year, and made benefit payments totaling $5.6 billion.

The average corporate system had assets of $2.1 billion, and used an average of 10.5 managers, or one manager for each $165 million of assets, when allowance is made for internally managed assets.

Twenty-three corporate sponsors managed a total of more than $22 billion inhouse, with

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The Top 100 funds/sponsors (Assets in millions)

1	California Public Employes	$17,958
2	TIAA/CREF	14,366
3	General Motors Corp.	12,973
4	N.Y. State Employes	11,682
5	N.Y.C. Employes/Teachers	10,461
6	N.Y. State Teachers	6,463
7	General Electric Co.	6,023
8	N.J. Div. of Investment	5,171
9	Ford Motor Co.	4,900
10	Western Electric Co.	4,828
11	U.S. Steel & Carnegie	4,700
12	Ohio State Teachers	4,611
12	Texas State Teachers	4,611
14	IBM Corp.	4,476
15	Pennsylvania School Employes	4,395
16	Ohio Public Employes	4,300
17	Wisconsin Investment Board	4,229
18	E.I. DuPont De Nemours	4,205
19	Michigan State Employes	4,146
20	Minnesota Investment Board	4,034
21	North Carolina Employes	3,940
22	Exxon Corp.	3,624
23	Florida Retirement System	3,090
24	Washington Public Employes	2,750
25	Sears, Roebuck & Co.	2,676
26	Western Conf. of Teamsters	2,600
27	Pacific Telephone	2,541
28	Los Angeles County Employes	2,539
29	Rockwell International	2,494
30	Eastman Kodak Co.	2,442
31	Bell System Savings Plan	2,350
32	Pennsylvania State Employes	2,340
33	New York Telephone	2,300
34	Illinois Teachers	2,179
35	Boeing Co.	2,169
36	Shell Oil Co.	2,162
37	Maryland Public Employes	2,100
37	Mobil Oil Co.	2,100
39	General Telephone & Electronics	2,052
40	Georgia State Retirement	2,037
41	Teamsters Central States	2,021
42	Chrysler Corp.	2,014
43	United Nations Staff Fund	1,950
43	United Technologies	1,950
45	Bethlehem Steel	1,926
46	Standard Oil Co. (In.)	1,907
47	Southwestern Bell Telephone Co.	1,894
48	McDonnell Douglas Corp.	1,829
49	Alabama Public Employes	1,828
50	Colorado Public Employes	1,815
51	Westinghouse Electric Co.	1,800
52	Arizona Public Employes	1,788
53	Lockheed Corp.	1,787
54	Standard Oil Co. (Ca.)	1,742
55	Texaco Inc.	1,679
56	South Carolina Employes	1,632
57	United Air Lines	1,553
58	Hawaii Public Employes	1,525
59	Virginia Supplemental System	1,510
60	Southern Bell Telephone	1,461
61	Mass. Employes/Teachers	1,460
62	Oregon Public Employes	1,454
63	N.Y.C. Teachers Annuity	1,438
64	Atlantic Richfield	1,420
65	Connecticut Trust Funds	1,405
66	Caterpillar Tractor Co.	1,400
66	Union Carbide Corp.	1,400
68	Tennessee Public Employes	1,358
69	Detroit Retirement System	1,336
70	Louisiana Teachers	1,312
71	RCA Corp.	1,300
72	American Tel. & Tel.	1,261
73	Pacific Gas & Electric	1,248
74	American Airlines	1,219
75	South Central Bell Telephone	1,207
76	Gulf Oil Corp.	1,142
77	Iowa Public Employes	1,135
78	Armco Steel Corp.	1,128
79	General Dynamics Corp.	1,125
80	Texas Public Employes	1,113
81	Missouri Public School Employes	1,103
81	Illinois Bell Telephone	1,103
83	Hughes Aircraft Co.	1,100
83	Phillips Petroleum	1,100
85	Monsanto Co.	1,083
86	Sperry Corp.	1,080
87	Goodyear Tire & Rubber	1,057
88	New England Telephone	1,019
89	LTV Corp.	1,011
90	Illinois Municipal Employes	1,007
91	International Harvester	1,000
92	Ohio School Employes	994
93	Procter & Gamble	899
94	Bell of Pennsylvania	888
95	Mountain States Telephone	879
96	San Francisco City, County	868
97	Illinois Bd. of Investments	862
98	Alcoa	856
99	Michigan Bell	844
100	Republic Steel	840
	Total	**270,082**

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? news... Late news... Late news... Late news... Late news

United names Grenfell of London

CHICAGO—United Air Lines Inc. has named Morgan Grenfell Investment Services, Ltd., London, as an international manager for a portion of its $1.6 billion pension assets. Michael Dobson, assistant director of Morgan Grenfell & Co., Ltd., parent company of the investment services operation, confirmed that the firm will manage "a sizable amount of money" for United Air Lines. A spokesman at United had no comment.

Umbrella agency planned?

WASHINGTON—The administration's ERISA reorganization task force will recommend r etention of dual administration and establishment of a separate organization to coordinate activities between existing agencies, according to various sources. The panel's recommendation, which had not received White House approval at presstime, is seen as a compromise between those who favor a single agency approach and those who want to keep the current structure. The final recommendation is due to be sent to Congress by the end of the month.

Citibank chosen as master trust

NEW YORK—Carrier Corp., a United Technology's subsidiary with approximately $200 million in employe benefit assets, has transferred its master trust from Bankers Trust Co., New York, to Citibank, N.A., New York. Managers of the plan assets include Bankers Trust (short term), Batterymarch Financial Management Corp., Boston, Chemical Bank, New York, ISI Corp., Oakland, Ca., NSR Asset Management Corp., New York, and Scudder, Stevens & Clark, New York. At the same time, Inmont Corp. switched its master trust from Chemical Bank to Citibank. The company has about $50 million in pension assets managed by Batterymarch, Chemical Bank, Delaware Investment Advisors, Philadelphia, and ISI. Charles Easton, Inmont's treasurer, said that the move was a result of United Technology's desire for a common trustee and uniform reporting. "There's been no problem with Chemical Bank," he said.

MAC postpones removal U.S. Trust

NEW YORK—The Municipal Assistance Corporation has postponed its attempts to remove U.S. Trust Co. as trustee for the MAC bondholders. Prompted by the theft of 20 unissued MAC certificates from the bank's storage vault, the state agency originally requested that U.S. Trust resign as trustee for the MAC bondholders, which are primarily New York banks, and city municipal pension funds. However, MAC has agreed to delay a vote of bondholders to see if they would drop U.S. Trust after two New York banks told the state agency that they thought U.S. Trust should continue as trustee. While it is up to the 250,000 bondholders to decide whether or not to drop the bank, MAC will informally survey bondholders.

$42 million placed in GIC

WASHINGTON—The National Rural Electric Cooperative Assn. has given Aetna Life and Casualty Co. in Hartford $42 million to place in a guaranteed investment contract. The money for the five-year contract came from the proceeds of another five-year contract with John Hancock Mutual Life Insurance Co. which had expired. NRECA received "a pretty good rate" on the new contract, according to Peter Morris, head of investments there.

DOL throws cold water on venture capital

By Clare Minick

WASHINGTON—The hopes of venture capitalists that pension funds might provide a major source of new funds could be dashed if a proposed regulation by the Department of Labor (DOL) is adopted.

The regulation stems from an attempt by the DOL to clarify what constitutes "plan assets" under ERISA.

Under the proposed regulation, the definition of plan assets would be extended to include the property of a corporation or a limited partnership in which the pension fund has invested.

Exempted under the proposed regulation would be the assets of an investment company registered under the 1940 Act and the assets of insurance companies where a pension plan may have bought a guaranteed income contract.

Companies that invest in publicly traded securities also would be exempted, even though the company itself is not registered under the 1940 Act.

If the regulation is adopted as proposed, the assets of a venture capital partnership would have to be placed in a trust and those in the partnership making the investments would be plan fiduciaries.

Venture capitalists object to both concepts saying the trust arrangement would not be workable for a venture capital partnership, and that if the general partners were plan fiduciaries it would interfere with the usual workings of such a partnership.

For example, if the general partners were plan fiduciaries, they would run into difficulties with the prohibited transaction section of ERISA. In the December 1979 issue of Venture Capital, a trade publication, a law firm, Testa, Hurwitz & Thibeault was quoted:

"By characterizing venture capitalists as fiduciaries of pension fund assets, the Plan Asset Regulations would raise serious questions as to the ability of those investors to participate in the ongoing management of their portfolio companies or to engage in any financial transaction beyond their initial investments.

"Under Section 3(14)(G) of the Act, a portfolio company would be considered a "party in interest" of a plan if the venture capital investor owned 50% or more of the combined voting power of all classes of voting stock or 50% or more of the value of all classes of stock of the corporation."

Another potential problem for venture capital partnerships is that the general partners are compensated on the basis of profits.

If the partnerships were to register under the 1940 Act, they would no longer be permitted compensation on the basis of profits.

Ironically, the Securities and Exchange Commission has been working on an exemption for venture capital partnerships which would permit the present type of compensation.

"Regardless of how you look at it, the net effect of the proposed regulation is that pension funds could not invest in venture capital partnerships," said John T. Shinkle, partner of Caplin & Drysdale, the law firm representing the National Venture Capital Assn.

Further, Mr. Shinkle said that there is a possibility that if the definition of plan asset

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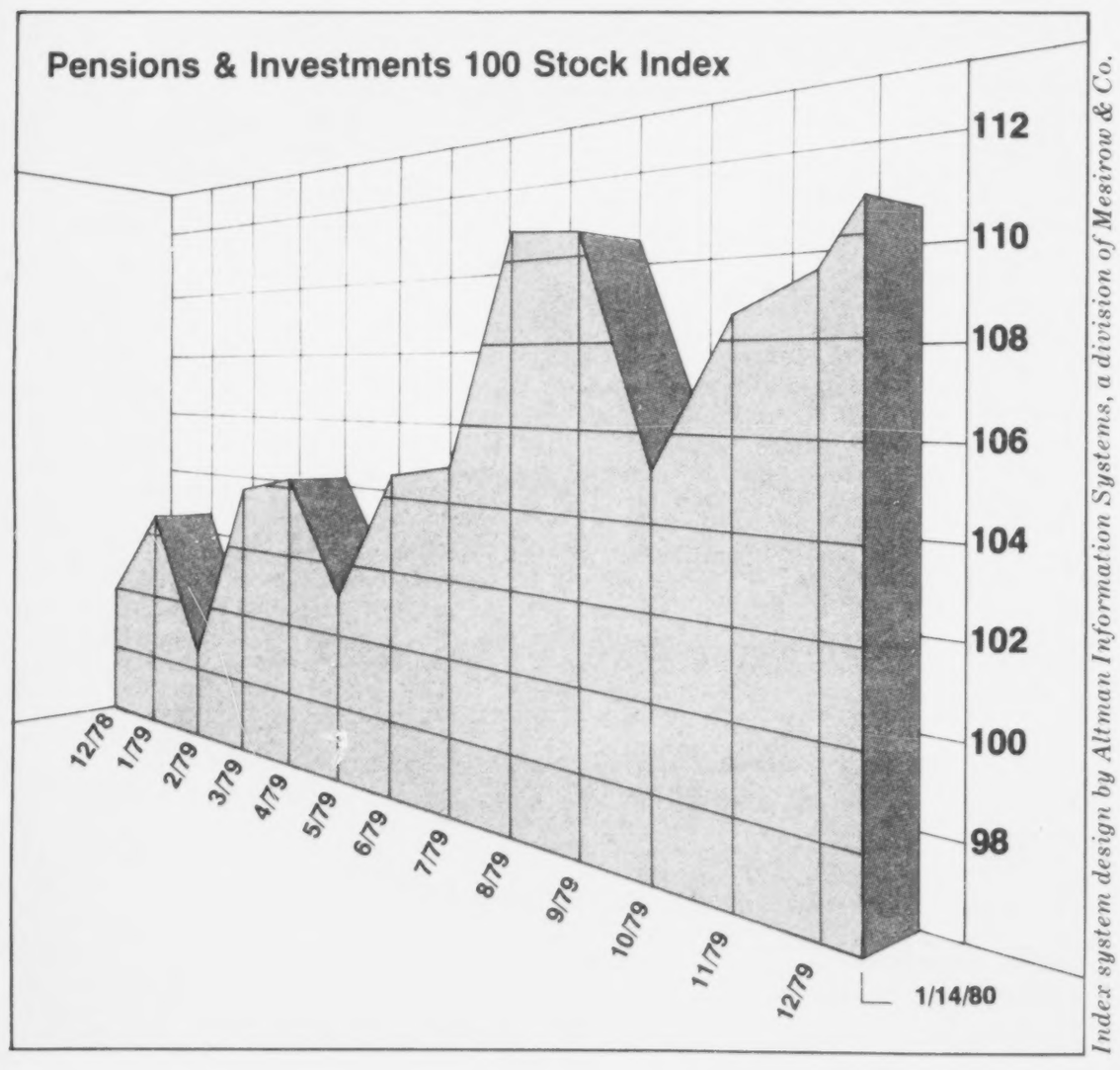

P&I Index trails S&P, Dow

NEW YORK—The *Pensions & Investments* Index gained 1.2% in the two weeks ended January 14, compared with a 2.2% gain recorded by the Standard & Poor's (S&P) 500 index.

The *P&I* index, which tracks the price movements of the 100 stocks most held by pension funds, investment managers and other institutions, registered at 110.78 on January 14.

The index was set at 100 at the start of 1979. It is based on the 100 largest holdings as reported each quarter to the Securities & Exchange Commission on form 13f by institutions investing more than $100 million and published by Computer Directions Advisors Inc., Silver Spring, Md.

The *P&I* index trailed not only the S&P 500, but also the Dow Jones Industrial Average, which was up 2.9%, and the New York Stock Exchange Composite, which was up 2.6% for the period.

The stocks in the index registering the largest price gains in the period were Boeing Co., up 14.6%, Travelers Corp., up 13.4%, and Raytheon Co., up 12.7%.

The stocks showing the largest declines were Deere & Co., down 9.9%, American Broadcasting, down 9.2%, and General Reinsurance Corp., down 8.8%.

The index was developed by Arthur Altman, president of Altman Information Systems Inc., Chicago, specializes in the use of computers for securities evaluation and selection, and does customized programs for the investment community. ■

Monumental Corp. dissolves its investment subsidiary

By Les Stern

BALTIMORE—In a surprise move, the insurance holding company Monumental Corp. is dissolving its investment management subsidiary just as it was launching a new marketing effort promoting recently developed programs.

The firm has told clients of Monumental Capital Management Inc. to find new managers, and referred the clients to Alex Brown & Sons, also located in Baltimore.

The subsidiary managed outside assets of $73 million, including about $60 million in tax-exempt assets. The $750 million in insurance company assets the investment management wing ran will be managed inhouse at the holding company.

Although the holding company will retain that investment operation, the top four people at the investment management firm will be leaving. They include Frank Cappiello, the well-known president; John R. Hammond, the head of equities; Francis R. Trainer, the head of fixed-income; and Don Walters, director of marketing.

Charles Hayes, secretary/treasurer at the holding company, said the reason for the dissolution is that the four-year-old investment subsidiary "wasn't turning out as successfully as we would have liked to have seen it." He declined to say whether the subsidiary was losing money.

The decision still caught many by surprise. The investment firm had just recently developed new fixed-income and equity products with reliance on computer screens (*Pensions & Investments*, Nov. 4, 1979), and an intense marketing effort was underway.

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On April 14 *Pensions & Investments* will publish profiles of leading Canadian and International investment management operations. Questionnaires on which the profiles will be based have been mailed to some 80 firms. If your firm is a Canadian manager of tax-exempt assets, or manages U.S. assets in international markets, and has not received a questionnaire, please call Margarite Simanca at 212/986-5050.

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Profiles of corporate, public and union funds/sponsors in Pensions & Investments' 100

Presented here are *Pensions & Investments'* profiles of the nation's Top 100 pension and/or employe benefit funds and sponsors. The assets of these leading 100—including corporate, state and local government, and Taft-Hartley fund sponsors—top $270 billion. The unique collection of facts and information presented below and on subsequent pages includes the name of the fund sponsor, total assets and a description of the fund or funds that are included in the overall pool of assets of the sponsor. Individual profiles alsc detail who manages assets for the fund sponsor, contributions by the sponsor in 1979, asset allocation break-outs for the funds and several other pertinent facts (whether the fund uses index fund vehicles, guaranteed investment contracts or a master trust arrangement).

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State of Alabama

	($ millions)
Total assets	1,828
Employer contributions	211
Benefit payments	110

MONTGOMERY—After six years of using intrastate placement of funds, officials of the Retirement Systems of Alabama are raving about the results. The $1.8 billion fund has less than 5% of its holdings in equities with the majority of assets in Ginnie Maes and short- and long-term corporate bonds.

Warren Fredericks, director of investment research, said the intrastate fund placement will continue because fund officials believe the Ginnie Maes are a relatively risk free investment, which is quite attractive.

With total assets of $1.8 billion the fund ranks 49th among the 100 largest funds and 21st among the public funds. The assets of the totally internally managed fund increased $349 million over last year.

The Alabama system is comprised of three plans. They are: the Teachers' Retirement System of Alabama, $1.2 billion; the Employes' Retirement System of Alabama, $567 million; and the Judicial Retirement Fund, $7 million.

According to fund officials, none of the fund assets is indexed. The fund has no GICs, but has invested some $73 million in Canadian markets (U.S. dollar denominated). The fund does not use financial futures.

Although the fund does utilize an option program, as of September 30, none of the equity holdings was optioned.

The Teachers' Retirement System Board of Control and Employes' Retirement System Board of Control serve as master trustee for the fund.

The asset mix of the fund is 3.2% in stocks, 71.6% in bonds, 7.5% in cash/equivalents and 17.7% in government guaranteed mortgages.

The fund uses the First National Bank of Birmingham as an investment management consultant.

The key personnel involved in administering the Alabama fund system are Dr. David G. Bronner, secretary-treasurer; Dr. William C. Walsh, deputy secretary-treasurer; and Warren J. Fredericks, director of investment research.

Aluminum Co. of America

	($ millions)
Total assets	856
Employer contributions	150
Benefit payments	81

PITTSBURGH—Alcoa showed a 23% increase in total assets over the $600 million figure listed in the 1979 Money Market Directory. The current fund size places Alcoa 98th in the Top 100 and 53rd among the corporate pension funds.

The fund has $36 million in an index fund, $24 million in GICs and $7 million in foreign markets.

The fund uses 19 managers. They are: Brundage, Story & Rose, New York; Capital Guardian Trust Co., Los Angeles; Cleveland Trust Co.; Crocker Investment Management Corp., San Francisco; Equitable Life Assurance, New York; Fayez Sarofim, Houston; Fischer, Francis, Trees & Watts, New York; Founders Capital Management; Denver; John Hancock Mutual Life Insurance Co., Massachusetts Financial Services, Boston; Mellon Bank, Pittsburgh; Morgan Guaranty Trust Co., New York; Metropolitan Life, New York; Pioneering Management Corp., Boston; Stephanson and Co., Denver; Stralem & Co., New York; Suncan Equity Services, Boston; Travelers Insurance Co., Hartford; and Wells Fargo Investment Advisors.

As of Sept. 30, 58% of assets were in stocks, 23% bonds, 16% cash equivalents, 2% real estate and 1% "others." Wells Fargo Investment Advisors and The Boston Co. act as investment management consultants for the fund. Mellon Bank also serves as master trustee. None of the money is managed inhouse.

Key executives responsible for the fund's management are Joseph C. Pellegrino, assistant treasurer; Kenneth R. Siger, manager-investments; and Richard J. Forster, financial analyst.

American Airlines

	($ millions)
Total assets	1,219
Employer contributions	82
Benefit payments	43

DALLAS—During 1979 American Airlines moved its corporate headquarters from New York to Dallas, and in the wake of that move John Dembeck, treasurer, who had overseen the operations of the Airlines' pension funds, resigned to join Olin Corp.

Mr. Dembeck was replaced by John Pope, treasurer, as the key executive involved with the company's pension assets.

The Airlines' assets of $1,219 million as of Sept. 30, ranks the company 74th among the 100 largest employe benefit sponsors, and 37th among corporate sponsors.

The assets are in three plans. The Fixed Benefit Trust has assets of $829 million. The Pilots' Variable Benefit Trust has assets of $344 million, and the Non-Pilots' Variable Benefit Trust has assets of $45 million.

The investment managers of the assets are Aetna Capital Management, Hartford; Brown Brothers Harriman & Co., New York; Capital Guardian Trust Co., Los Angeles, Confederation Life Insurance Co., Toronto; First National Bank of Boston; Harris Trust & Savings Bank, Chicago; INA Capital Management, Philadelphia; Penmark Investments Inc., Chicago; Redwood Capital Management Inc., Baltimore; Republic National Bank of Dallas; Vilas-Fischer Associates, New York.

The First National Bank of Boston is the master trustee for the Pilots' Variable Benefit Trust, while Republic National Bank of Dallas is the master trustee for the other plans.

No new managers were added in 1979, according to Mr. Pope, and no assets are managed internally, though some may be taken in mid-1980.

According to Mr. Pope, the company has a policy of limiting each manager to $100 million in assets.

About 68% of the assets of the airline's funds are invested in equities, 24% in bonds, and 8% in cash. No assets are invested in guaranteed return contracts, none is invested in foreign securities, and options are not written against the holdings.

Mr. Pope, John J. Tierney, assistant treasurer-trust investments, are the key executives involved in the administration of the pension assets.

American Telephone & Telegraph Co.

	($ millions)
Total assets	1,261
Employer contributions	198
Benefit payments	48

NEW YORK—American Telephone & Telegraph Retirement Plan increased its internally managed index fund by $140 million in the past year.

According to J.W. English, director-pension fund administration, $182 million of AT&T's $1.261 billion assets are internally managed in the index fund, which was started in October 1977. Mr. English explained that the fund was started "very small in order to test whether we were able to track the S&P. When we saw we were able to track it, we increased the amounts of money put into it."

Previously, AT&T had a $65 million index fund with Batterymarch Financial Management, Boston, but blended those assets into the inhouse index fund in mid-1979.

AT&T's fund ranked 72nd as of Sept. 30, 1979 among the 100 largest fund sponsors. Among corporate funds in the *P&I* Top 100, AT&T ranked 35th.

Assets in 1978 were $1 billion.

AT&T uses The Bank of New York and Chemical Bank, both in New York, as balanced managers. Jennison Associates Capital Corp., New York; Pacific Investment Management Company, Newport Beach, Ca., and Prudential Insurance Co. of America, Newark, N.J., manages fixed income. National Bank of Detroit manages equities.

The only assets managed inhouse are those in the index fund.

AT&T does not use GICs, options, financial futures, or a master trustee.

None of its assets is invested in foreign markets. The company does not have an investment management consultant.

As of Sept. 30, 1979, 58% of the assets was invested in stocks, 28% in bonds, 9% in cash/equivalents, and 5% in real estate.

In April 1980, AT&T plans to establish a group trust fund with $300 million in Bell system contributions, including those from the AT&T Retirement Plan. The aim of the employe benefit trust fund is to facilitate transference of accrued pension assets when an employe moves from one system to another. The assets will be managed separately from the Retirement Plan's other assets.

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How assets are spread among classes of funds/sponsors in *P&I* Top 100

Type of fund/sponsor	No. of funds in top 100	Assets ($billion)	As % of Top 100	As % of top 1,000
Corporate funds/sponsors	56	$119.1	44.2%	28.1%
Public funds/sponsors	40	129.8	48.1	30.7
Misc. (TIA/CREF,UN)	2	16.3	6	3.9
Taft-Hartley/Union	2	4.6	1.7	1.1

Pensions & Investments, 1/1/80

Top 100 profiles

Arizona State Retirement System

	($ millions)
Total assets	1,788
Employer contributions	94
Benefit payments	207*

*estimated

PHOENIX—The Arizona system added a new consultant and continued its less than smooth relationship with the state advisory board during 1979.

However, despite a well publicized FBI investigation which began in June and found no evidence of wrongdoing, the fund continued evenly in the investment area with its seven managers.

Pension assets increased about 16% over last year to rank it 52nd among the Top 100 and 23rd among public employe funds.

The system has one fund which is comprised of pooled accounts from throughout the state. The fund has seven managers for its assets: Bernstein-Macaulay, New York; Citizens and Southern Investment Counseling Inc., Atlanta; Kemper Financial Services Inc. Chicago; Scudder, Stevens & Clark, Los Angeles; Valley National Bank, Phoenix; First Pennsylvania Bank, Philadelphia; and Funds Advisory Co., Houston.

State law requires the fund to have outside managers, but short-term cash with a 15-day maturity limit, is managed inhouse.

The asset mix for the fund on September 30, 1979 was 21% stocks, 43% bonds, 30% cash equivalents and 6% real estate.

No money is indexed, in foreign markets, futures, or part of an options program. No master trustee or management consultant is used, although E.F. Hutton and A.G. Becker (named in October) perform performance measurement services.

Key executives for the fund are Max Sullivan, director; Lynn Cochran, assistant director; Charles Moody, assistant director; and John Hendricks, investment accountant.

Armco Inc.

	($ millions)
Total assets	1,128*
Employer contributions	100
Benefit payments	58

*estimate

MIDDLETOWN, OH.—Pension and welfare benefits at Armco showed an increase of $152 million—40%—during the year ending Sept. 30, 1979.

The amount ranked Armco 78th among the Top 100 and 40th among the corporate funds.

The company is continuing its policy of international investing which it began last year when it hired Warburg International Investment Management. About $16 million now is invested overseas. International investing is also done by another manager, Capital Guardian Trust Co., Los Angeles.

The company also moved an additional $46.2 million to inhouse management in 1979 for a total of $183.6 million.

As of September 30, 51.4% of the portfolio was in stocks, 31.8% bonds, 11.6% cash equivalents and 5.2% real estate. Armco also has $500,000 in an option account written against its equity holdings.

The asset breakdown for Armco's four primary plans are: $478.8 million in a Non-Contributory Pension plan, $197.7 million in Pension Agreements, $204.2 million in a Thrift Plan and $8.6 million in an ESOP.

Managers for the funds are the Mellon Bank, Pittsburgh; Smith, Barney, Harris Upham & Co., New York; Thorndike, Doran, Paine & Lewis Inc., Boston; Capital Guardian Trust, Los Angeles; Warburg International Investment Management Ltd., Rosenberg Capital Management, and the Rosenberg Real Estate Equity fund both of San Francisco and First City National Bank of Houston.

Chemical Bank is the master

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Overview...

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three of the largest, General Electric, U.S. Steel and Carnegie, and Sears managing all of their assets inhouse.

The $22 billion managed internally represented 18.5% of the total assets of the 56 corporate systems in the Top 100, and it represented a 29% increase in the amount managed inhouse.

Twenty corporate sponsors reported indexed assets in 1979 compared with only 13 in 1978, and the amount indexed had climbed to $2.8 billion, up 64% from $1.7 billion last year.

The 56 corporate funds also had $523 million invested in international investments, mainly equities, the survey showed.

The largest single pool of employe benefit assets in the California Employes Retirement System's two funds which have combined assets of $17.958 billion, up 16.3% over last year.

The two funds are treated as one for *P&I*'s ranking because they are managed by the same key officials.

The California Public Employe's fund, the larger of the two, has assets of $11.4 billion, while the Teachers' fund has assets of $6.5 billion.

If the California funds had been considered separately they would have ranked fifth and seventh, and TIAA/CREF would have been the largest fund, with assets of $14.3 billion.

The largest corporate fund was that of General Motors, which had assets of $12.9 billion, up 12.1% over last year.

However, if the Bell System's funds had been considered as one it would have been by far the largest pool with total assets of $27 billion.

The Bell System's funds, however, are managed independently.

The dramatic increase in Bell System assets reported this year compared with last year—a gain of 44%—is partly explained by the addition of two funds this year.

The Southwestern Bell fund was inadvertently omitted last year, and this year the Bell Systems Savings Plan, with assets of $2.3 billion, has been included.

The smallest fund in the Top 100 was that of Republic Steel, which had assets of $840 million. Last year the smallest fund was LTV Corp. with assets of $659 million. However, because of the merger with Lykes Corp. as of Dec. 31, 1978, LTV's pension assets jumped to $1.011 billion and the fund now ranks 89th.

Several of last year's Top 100 funds dropped out this year, including Trans World Airlines, Pan American Airways, Conoco, and Firestone Tire & Rubber.

New funds in the Top 100 included Monsanto, Alcoa and Phillips Petroleum.

The smallest fund in the Top 1,000 this year had assets of $41 million compared with $33 million for the smallest fund last year.

Besides the corporate and state and local employe benefit systems there were union funds, the Western Conference of Teamsters fund with $2.6 billion in assets, and the Central States Teamsters fund with $2.02 billion in assets.

There were also two miscellaneous funds, TIAA/CREF and the United Nations Staff Fund, which had assets of $1.9 billion. ■

Ranking of funds/sponsors 101-1,000

(Source: 1980 Money Market Directory)

No.	Company/Sponsor	Location	Assets ($ Mils.)
101	TransWorld Airlines	New York	830
102	Tenneco	Houston, Tx.	830
103	Conoco	Stamford, Ct	820
104	Firestone Tire & Rubber	Akron, Oh	819
105	Illinois Universities'	Chicago	802
106	West Virginia Employes	Charleston, W.Va.	800
107	Pan American Airways	New York	797
108	Ohio Police & Fire	Columbus, Oh.	785
109	Bendix Corp.	Southfield, Mich	750
110	Ind. Public Employes	Indianapolis	723
111	Kansas Employes	Topeka	713
112	Methodist Fund	Evanston, Ill	713
113	L. A. Fire & Police	Los Angeles	705
114	L. A. City Employes	Los Angeles	702
115	Mine Worker HQ	Washington, D.C	700
116	Eastern Air Lines	Miami	698
117	Kentucky Teachers	Louisville	698
118	Greyhound	Phoenix	695
119	Michigan Bell	Detroit	694
120	Signal Cos.	Beverly Hills	692
121	Utah State System	Salt Lake City	690
122	Mississippi Employes	Jackson	682
123	Ohio Bell	Cleveland	680
124	Marcor	Chicago	665
125	Sun Co.	Radnor, Pa	655
126	N. J. Bell Telephone	Newark	648
127	Xerox	Stamford, Ct.	634
128	International Paper	New York	622
129	Textron	Providence	616
130	Cities Service	Tulsa, Ok	616
131	Montana Bd. of Inv	Helena, Mt	614
132	Elec. Wkrs (IBEW)	Arlington, Va	613
133	I.T.T	New York	608
134	Nevada Employes'	Carson City	605
135	Deere & Co	Moline, Il	605
136	Chicago Teachers'	Chicago	600
137	Dow Chemical	Midland, Mi	600
138	Union Oil	Los Angeles	590
139	Owens-Illinois	Toledo	584
140	Inland Steel	Chicago	582
141	Alaska Employes	Juneau	579
142	National Steel	Pittsburgh	560
143	Northrop	Los Angeles	558
144	American Can	Greenwich, Ct.	558
145	L.A. Water & Power	Los Angeles	557
146	Grumman	Bethpage, NY	555
147	Phila. Municipal Fund	Philadelphia	550
148	Northwestern Bell	Omaha	540
149	Kentucky Systems	Frankfort	539
150	T.V.A.	Knoxville, Tn	529
151	J.C. Penney	New York	528
152	FMC	Chicago	526
153	Bell Telephone Labs	Murray Hill, NJ	523
154	Chicago Employes'	Chicago	521
155	TRW	Cleveland	519
156	Commonwealth Edison	Chicago	515
157	Baltimore Employes'	Baltimore	504
158	Delta Air Lines	Atlanta	500
159	General Foods	White Plains, NY	500
160	Southern Baptist Fund	Dallas	499
161	Continental Group	New York	472
162	United Presbyterian Fund	Philadelphia	472
163	Pacific NW Bell	Seattle	456
164	Southern Ca. Edison	Rosemead, Ca	455
165	Indiana Teachers'	Indianapolis	455
166	Kraft	Glenview, Il	450
167	Consolidated Edison	New York	449
168	Johns-Manville	Denver	438
169	Celanese	New York	437
170	Marathon Oil	Findlay, Oh	431
171	PPG Industries	Pittsburgh	430
172	Honeywell	Minneapolis, Mn	426
173	Milwaukee Employes'	Milwaukee	426
174	Chicago Police	Chicago	426
175	Kennecott Copper	New York	416
176	Hercules Inc	Wilmington, De	414
177	Eli Lilly	Indianapolis	412
178	Halliburton	Duncan, Ok	412
179	Natl. Rural Elect. Coop	Washington	409
180	Minnesota Mining	St. Paul	406
181	Boilermakers, B'smiths	Kansas City, Ks	405
182	J. Ray McDermott	New Orleans	402
183	Episcopal Church	New York	400
184	General Tire	Akron	400
185	Martin Marietta	Bethesda, Md	400
186	Oklahoma Teachers'	Oklahoma City	400
187	R.J. Reynolds	Winston-Salem	400
188	Bakery Workers	Washington, DC	390
189	National Auto Dealers	McLean, Va	385
190	Getty Oil	Los Angeles	382
191	Crown Zellerbach	San Francisco	380
192	New Mexico Educational	Santa Fe	380
193	B.F. Goodrich	Akron	376
194	Sandia Labs	Albuquerque, NM	375
195	Arkansas Teachers	Little Rock	374
196	Eaton Corp.	Cleveland	370
197	So. New Eng. Tel	New Haven	370
198	Texas Instruments	Dallas	359
199	Operating Engineers	Washington, DC	358
200	Allied Chemical	Morristown, NJ	358
201	Colgate-Palmolive	New York	357
202	Elec. Ind. Joint Bd	Flushing, NY	357
203	Southern Co. Ser.	Atlanta	355
204	R.I. Retirement Sys	Providence	350
205	Whirlpool	Benton Harbor, Mi	347
206	Federated Dept. Stores	Cincinnati	344
207	Motorola	Schaumburg, Il	344
208	Raytheon	Lexington, Ma	342
209	Dresser Industries	Dallas	342
210	Episcopal Church Fund	New York	338
211	Warner-Lambert	Morris Plains, NJ	338
212	Safeway Stores	Oakland, Ca	337
213	Merck	Rahway, NJ	336
214	Savings Assn. Fund	White Plains, NY	331
215	Ladies Garment Wkrs	New York	330
216	Esmark	Chicago	329
217	Dana Corp.	Toledo	328
218	Hosp. & Health Care	New York	327
219	American Cyanamid	Wayne, NJ	324
220	American Elect. Power	New York	323
221	Northern Ca. Carpenters	San Francisco	316
222	Olin Corp	Stamford, Ct	316
223	New Mexico Employes'	Santa Fe	315
224	Electrical Wkrs (IBEW)	Washington	314
225	Michigan Muni. Emps	Lansing, Mi	312
226	So. Cal. Food Workers	Inglewood, Ca	311
227	Reynolds Metals	Richmond, Va	311
228	Ashland Oil	Russell, Ky	310
229	Jewel Companies	Barrington, Il	310
230	Rohm & Haas	Philadephia	310
231	International Bank	Washington	308
232	Consumers Power Co	Jackson, Mi	307
233	Arkansas Employes	Little Rock	305
234	Bechtel Corp	San Francisco	300
235	Litton Industries	Beverly Hills	300
236	Wayne County Employes'	Detroit	300
237	ARAMCO Services	Houston	299
238	American Express	New York	299
239	Marine Engineers	New York	299
240	Crane Co.	New York	297
241	Upjohn	Kalamazoo, Mi	293
242	Columbia Gas System	Wilmington, De	288
243	Savings Banks	New York	285
244	New Hampshire System	Concord	284
245	YMCA Retirement	New York	284
246	Teamsters Council #10	Boston	284
247	Ches. & Potomac Tel of Md.	Washington	283
248	Florida Power & Light	Miami, Fl	280
249	Ma.-Boston Retirement	Boston	278
250	Az. Public Safety	Phoenix	278
251	Consol. Natural Gas	New York	277
252	A&P	Montvale, NJ	276
253	Budd Co	Troy, Mi	276
254	Conrail	Philadelphia	275
255	So. Cal. Engineers	Pasadena	275
256	CBS Inc.	New York	273
257	Bristol-Myers Co	New York	270
258	Mead Corp	Dayton	270
259	NCR Corp	Dayton	270
260	Philip Morris	New York	270
261	Campbell Soup	Camden, NJ	268
262	Retail Employes (#1199)	New York	264
263	Idaho Public Empls	Boise	264
264	Maine Ret. System	Augusta	264
265	Burroughs Corp.	Detroit	263
266	United Church of Christ	New York	263
267	Borg-Warner	Chicago	262
268	Pacific Lighting	Los Angeles	260
269	Burlington Ind	Greensboro, NC	257
270	Brown & Williamson	Louisville, Ky	255
271	Machinists (#15)	New York	255
272	Ches. & Potomac Tel of Va.	Washington, D.C.	253
273	Chicago Transit	Chicago	250
274	Food Workers	Chicago	250
275	Gulf & Western	New York	250
276	Cook County Funds	Chicago	249
277	American Standard	New York	248
278	General Mills	Minneapolis	248
279	N.Y. Longshoremen	New York	247
280	Nebraska Retirement	Lincoln	246
281	Alameda Cty Employes'	Oakland, Ca	246
282	Minneapolis Employes	Minneapolis	245
283	North Dakota Invt. Bd.	Bismarck	245
284	Philadelphia Electric	Philadelphia	243
285	N.Y. Carpenters	New York	243
286	Georgia-Pacific	Portland, Or.	243
287	Scott Paper	Philadelphia	241
288	Brown & Root	Houston	240
289	Corning Glass	Corning, NY	240
290	NL Industries	New York	240
291	Emerson Electric	St. Louis	239
292	Uniroyal	Middlebury, Ct	239
293	Cincinnati Retirement	Cincinnati	239
294	American Brands	New York	238
295	Boise Cascade	Boise, Id	237
296	Abbott Labs	North Chicago	237
297	Pfizer	New York	236
298	San Diego County	San Diego.	236
299	Denver Public School	Denver	234
300	W.R. Grace	New York	231
301	American Red Cross	Washington	231
302	Niagara Mohawk Pwr	Syracuse	230
303	Beatrice Foods	Chicago	230
304	Chicago Firemen's	Chicago	230
305	Lutheran Church in Amer.	Minneapolis	230
306	K Mart Corp	Troy, Mi	230
307	Ethyl	Richmond, Va	229
308	Weyerhaeuser	Tacoma, Wa	229
309	Kellogg Co.	Battle Creek, Mi	228
310	CIBA-Geigy	Ardsley, NY	228
311	Timken Co.	Canton, Oh	227
312	St. Regis Paper	New York	225
313	Northwest Airlines	St. Paul, Mn	223
314	So. Ca. Carpenters	Los Angeles	223
315	Missouri Employes'	Jefferson City	223
316	Fluor Corp	Irvine, Ca	222
317	Indiana Bell	Indianapolis	221
318	San Bernardino City	San Bernardino, Ca	220
319	United Telecom	Shawnee Mission, Ks	220
320	Wyoming Retirement	Cheyenne	220
321	Kimberly-Clark	Neenah, Wi.	218
322	Avco Corp	Greenwich, Ct.	218
323	Peoples Gas	Chicago	217
324	Amer. Natural Service	Detroit	217
325	No. Ca. Food Workers	Walnut Creek, Ca	215
326	Teamsters	Washington, DC	214
327	Wisconsin Telephone	Milwaukee	214
328	Nat'l. Maritime Union	New York	214
329	Contra Costa City	Martinez, Ca	212
330	Vermont Retirement	Montpelier	209
331	Libbey-Owens-Ford	Toledo	209
332	Delaware Employes'	Dover, De	207
333	Colt Industries	New York	206
334	Champion International	Stamford, Ct	206
335	Gen. Pub. Utilities	Parsippany, NJ	206
336	Phelps Dodge	New York	206
337	S. Dakota System	Pierre	205
338	United Parcel	Greenwich, Ct.	205
339	Dunn & Bradstreet	New York, NY	204
340	Orange County Empls	Santa Ana, Ca	203
341	Ches. & Potomac Tel of D.C.	Washington.	202
342	Lutheran Church Mo. Synod	St. Louis	202
343	Mid. South Utilities.	New Orleans.	202
344	San Diego City	San Diego.	202
345	Chicago Laborers'	Chicago	202
346	Johnson & Johnson	New Brunswick, NJ.	200
347	Kaiser Aluminum	Oakland, Ca	200
348	Allis-Chalmers	Milwaukee	199
349	Baltimore G&E	Baltimore	198
350	Gould	Rolling Meadows, Il.	196
351	Armstrong Cork	Lancaster, Pa	195
352	Occidental Petroleum	Los Angeles	195
353	Emhart Corp	Hartford	194
354	Northeast Utils	Hartford	193

Ranking of funds/sponsors 101-1,000

No.	Company/Sponsor	Location	Assets ($ Mils.)
355	Pullman	Chicago	193
356	J.P. Stevens & Co	New York	192
357	Union Pacific	New York	191
358	Northern Nat. Gas	Omaha	191
359	National Distillers	New York	189
360	Oklahoma Employes	Oklahoma City	188
361	Polaroid	Cambridge, Ma	187
362	Hewlett Packard	Palo Alto, Ca	187
363	American Baptist Fund	New York	186
364	Fruehauf Corp	Detroit	184
365	Farmland Industries	Kansas City, Mo	184
366	Milwaukee Country	Milwaukee	183
367	Teamsters #560, #617, #641	Union City, NJ	183
368	Motion Picture Pens	Studio City, Ca	182
369	Teamsters (Central Pa)	Reading, Pa	182
370	Remington Arms	Bridgeport	181
371	F.W. Woolworth	New York	180
372	Winn-Dixie Stores	Jacksonville, Fl	180
373	Ingersoll-Rand	Woodcliff Lake, NJ	180
374	Ma. Bay Trans. Auth	Boston	180
375	New York Education	New York	180
376	SmithKline	Philadelphia	180
377	Stage and Picture Oper	Studio City, Ca	180
378	Auto Workers Dist. 65	New York	180
379	Detroit Edison	Detroit	179
380	Singer	New York	179
381	Dallas Employes	Dallas	179
382	AMAX	Greenwich, Ct	178
383	Rexnord	Milwaukee	178
384	McGraw-Edison	Elgin, Il	178
385	R.R. Donnelley	Chicago	177
386	Marine Engineers	Brooklyn	177
387	Wheeling-Pitts. Steel	Pittsburgh	175
388	Coca-Cola	Atlanta	175
389	Sherwin-Williams	Cleveland	175
390	Western Air Lines	Los Angeles	175
391	Lever Brothers	New York	174
392	Seattle Employes'	Seattle	174
393	New Eng. Electric	Westborough, Ma	174
394	Inco	New York	173
395	Public Service E&G	Newark	173
396	Continental Air	Los Angeles	172
397	Southern Pacific	San Francisco	172
398	Hoffman-LaRoche	Nutley, NJ	171
399	Clark Equipment	Buchanan, Mi	170
400	El Paso Co	Houston	170
401	Louisiana School	Baton Rouge	170
402	Northern States Pwr	Minneapolis	170
403	Owens-Corning	Toledo	169
404	Pillsbury	Minneapolis	169
405	Typographical Union	Colo. Springs	168
406	Westvaco	New York	168
407	American Lutheran Church	Minneapolis	166
408	Ex-Cello-O	Troy, Mi	165
409	Ohio Edison	Akron	164
410	Central S.W. Corp	Dallas	164
411	Kaiser Steel	Oakland, Ca	163
412	Allegheny Ludlum	Pittsburgh	162
413	Quaker Oats	Chicago	162
414	Dayton Hudson	Minneapolis	160
415	IC Industries	Chicago	160
416	Disciples of Christ	Indianapolis	160
417	PBGC	Washington	160
418	Cleveland Electric	Cleveland	159
419	ASARCO	New York	159
420	Stauffer Chemical	Westport, Ct	159
421	Panhandle Eastern	Kansas City, Mo	158
422	American Motors	Southfield, Mi	158
423	Blue Cross	Chicago	156
424	Borden	New York	155
425	American Medical Assn	Chicago	154
426	City Investing	New York	154
427	Schlumberger	New York	154
428	Armsted Industries	Chicago	152
429	Studebaker-Worthington	New York	151
430	Pepsico	Purchase, NY	151
431	Squibb	New York	151
432	GAF Corp	New York	150
433	So. Ca. Plumbers (#30)	Los Angeles	150
434	Printing Pressmen	Los Angeles	150
435	Sacramento County	Sacramento	150
436	N.Y. Teamsters	Utica	150
437	Union Electric	St. Louis, Mo	149
438	L.I. Lighting Co	Mineola, NY	148
439	Chicago Carpenters	Chicago	146
440	Interlake	Oak Brook, Il	146
441	Allegheny Power	New York	146
442	Mars Inc.	McLean, Va	145
443	Cincinnati G&E	Cincinnati	143
444	Teamsters Local #710	Chicago	142
445	Allied Stores	New York	142
446	Hallmark Cards	Kansas City, Mo	142
447	Times Mirror	Los Angeles	142
448	Amer. Musicians	New York	142
449	Consol. Foods	Chicago	141
450	Southland Corp.	Dallas	141
451	R.H. Macy Inc	New York	140
452	Chicago Bridge	Oak Brook, Il	140
453	Ralston Purina	St. Louis, Mo	140
454	US Air	Washington, DC	140
455	Chessie System	Cleveland	140
456	Cooper Industries	Houston	140
457	Memphis City	Memphis	140
458	Presbyterian Church	Columbus, Ga	140
459	Time Inc	New York	140
460	George A. Hormel	Austin, Mn	139
461	Marsh & McLennan	New York	139
462	Standard Oil (Oh)	Cleveland	139
463	VEPCO	Richmond, Va	138
464	Norton Co.	Worcester, Ma	138
465	Schering-Plough	Kenilworth, NJ	138
466	Battelle Institute	Columbus, Oh	138
467	North Am. Philips	New York	137
468	Atlanta Employes	Atlanta	137
469	AMF, Inc	White Plains, NY	136
470	San Jose Systems	San Jose, Ca	136
471	Tektronix	Beaverton, Or	135
472	Pennsylvania Power	Allentown, Pa	135
473	Foremost-McKesson	San Francisco	134
474	Harris Corp	Melbourne, Fl	134
475	Del Monte	San Francisco	133
476	Dart Industries	Los Angeles	132
477	Nabisco	East Hanover, NJ	132
478	Duke Power	Charlotte, NC	132
479	CPC Inc.	Englwd Cliffs, NJ	132
480	Clothing Workers	New York	131
481	Santa Fe Railway	Chicago	131
482	Braniff Airways	Dallas	131
483	Chicago Park Empls	Chicago	130
484	De Luxe Check	St. Paul, Mn	130
485	Koppers Co., Inc.	Pittsburgh	130
486	Minneapolis Teachers	Minneapolis	130
487	Lithographers (#245)	Chicago	129
488	No. Ca. Laborers	San Francisco	128
489	Kern Cty, Employes'	Bakersfield, Ca	128
490	Baltimore Employes'	Baltimore	127
491	Carnation Co	Los Angeles	127
492	Gillette	Boston	127
493	Pacific Maritime Assn	San Francisco	127
494	Arthur D. Little	Cambridge, Ma	126
495	Oscar Mayer	Madison, Wi	126
496	National Airlines	Miami	126
497	Cincinnati Milacron	Cincinnati	125
498	Cincinnati Bell	Cincinnati	125
499	Joseph E. Seagram	New York	125
500	Diamond International	New York	125
501	Household Finance	Prospect Heights	125
502	Allen-Bradley	Milwaukee	125
503	Fairchild Industries	Germantown, Md	123
504	Outboard Marine	Waukegan, Il	123
505	Painters, Allied Trades	Washington, DC	123
506	A.O. Smith	Milwaukee	123
507	Union Camp	Wayne, NJ	123
508	Cummins Engine Inc.	Columbus, In	123
509	Carrier Corp	Syracuse, NY	121
510	Oper. Engrs. (#302, #612)	Seattle	121
511	Airco	Montvale, NJ	120
512	E G & G, Inc.	Wellesley, Ma	120
513	Pennzoil	Houston	120
514	Building Trades	Milwaukee	119
515	Eltra Corp	New York	119
516	Miami Employes	Miami	118
517	St. Louis Police	St. Louis, Mo	118
518	St. Louis School	St. Louis, Mo	118
519	Boston Edison	Boston	118
520	May Stores	St. Louis, Mo	117
521	Zenith Radio	Glenview, Il	117
522	Pennwalt Corp	Philadelphia	116
523	Fort Worth Employes	Fort Worth	116
524	McGraw-Hill	New York	116
525	Pro. Baseball Clubs	New York	115
526	New York State E&G	Binghamton, NY	115
527	Teamsters, Western	Pittsburgh	115
528	Publix Super Markets	Lakeland, Fl	115
529	Graybar Electric	New York	115
530	United Brands	New York	114
531	Northern Illinois Gas	Aurora, Il	114
532	Maritime Assn.	Houston	114
533	Norfolk & Western Rly	Roanoke, Va	113
534	American Stores	Wilmington, De	113
535	White Consolidated	Cleveland	113
536	Continental Tel	Atlanta	113
537	Avon Products	New York	113
538	Reader's Digest	Pleasantville, NY	113
539	Curtiss-Wright	Woodridge, NJ	112
540	Teamsters, Local #705	Chicago	112
541	U.S. Gypsum	Chicago	112
542	Walgreen	Deerfield, Il	112
543	San Joaquin Employes	Stockton, Ca	1112
544	Plumbers Local #597	Chicago	111
545	Int'l. Monetary Fund	Washington, DC	111
546	Upholsterers	Philadelphia	111
547	Pacific Longshoremen	San Francisco	111
548	Liggett Group	Montvale, NJ	111
549	Sprinkler Industry	Silver Spring, Md	111
550	AM International	Los Angeles	110
551	General Signal	Stamford, Ct	109
552	Laborers	Forest Park, Il	109
553	AMFAC Inc	San Francisco	108
554	Teamsters Local #959	Anchorage	108
555	Sundstrand Corp	Rockford, Il	108
556	Wisconsin Electric	Milwaukee	108
557	Rapid-American	New York	107
558	Pa. Teamsters	Philadelphia	106
559	Briggs & Stratton	Milwaukee	106
560	Masters, Mates	New York	106
561	Norton Simon	New York	106
562	So. Nat. Resources	Birmingham, Al	106
563	Oakland Employes	Oakland, Ca	105
564	Oper. Engrs. (#18)	Columbus, Oh	105
565	Western Greyhound	San Francisco	105
566	Memphis Light	Memphis	103
567	Fresno Employes'	Fresno, Ca	103
568	Amstar Corp	New York	102
569	Anchor Hocking	Lancaster, Oh	102
570	Belk, Leggett	Charlotte, NC	101
571	Brunswick	Skokie, Il	101
572	Caltex	New York	101
573	Carpenter Technology	Reading, Pa	100
574	Denver Employes	Denver	100
575	Diamond Shamrock	Cleveland	100
576	Houston System	Houston	100
577	Mo. Highway Empls.	Jefferson City, Mo.	100
578	Screen Actors Guild	Hollywood, Ca	100
579	Aerospace	El Segundo, Ca	100
580	Detroit Carpenters	Detroit	99
581	Ches. Tel. (West Va)	Washington, DC	99
582	Texas Eastern	Houston	99
583	Freeport Minerals	New York	99
584	Florida Power	St. Petersburg, Fl	98
585	Akzona	Asheville, NC	98
586	Machinists	Washington, DC	98
587	St. Joe Minerals	New York	98
588	Public Service of Colo	Denver	98
589	Air Products	Allentown, Pa	98
590	Gates Rubber	Denver	98
591	Flint Employes	Flint, Mi	97
592	Anheuser-Busch	St. Louis, Mo	97
593	Transco Inc	Houston	97
594	ICI Americas	Wilmington, De	96
595	Beneficial	Wilmington, De	96
596	Sterling Drug	New York	96
597	Carter Hawley	Los Angeles	95
598	Kroger Co	Cincinnati	95
599	San Mateo Employes	Redwood City, Ca	95
600	Savings Banks Employes	Boston	95
601	Sacramento Employes	Sacramento	95
602	Demarva Power	Wilmington, De	95
603	Joy Manufacturing	Pittsburgh	94
604	ACF Industries	New York	94
605	Western Sawmillworkers	Portland, Or	93
606	Western Union	Upper Saddle Riv., NJ	93
607	Cleveland-Cliffs Iron	Cleveland	93
608	Graphic Arts Union	Washington, DC	93
609	Boy Scouts	North Brunswick NJ	92
610	Electrical Wkrs. (#11)	Los Angeles	92

Ranking of funds/sponsors 101-1,000

No.	Company/Sponsor	Location	Assets ($ Mils.)
611	Steelworkers	Pittsburgh	92
612	Agway Inc	Syracuse	91
613	Maytag Co.	Newton, Ia	91
614	Missouri Employes	Jefferson City	91
615	Lear Siegler	Santa Monita, Ca	91
616	NVF Company	Yorklyn, De	91
617	SCM Corp	New York	90
618	Int. Minerals	Mundelein, Il	90
619	Pitney-Bowes	Stamford, Ct	90
620	Champion Spark Plug	Toledo	90
621	Texasgulf	Stamford, Ct	90
622	Donaldson Co	Minneapolis	89
623	Laborers	Dallas	89
624	Phila. Carpenter	Philadelphia	89
625	Reliance Electric	Cleveland	89
626	National Fuel Gas	New York	89
627	Austin Employes	Austin	88
628	Phoenix City Employes	Phoenix	88
629	St. Louis Employes	St. Louis, Mo	88
630	Store & Webster	New York	88
631	Typographical Union	Chicago	87
632	Marshall Field	Chicago	87
633	Levi Strauss	San Francisco	87
634	New Orleans L'shoremen	New Orleans	87
635	Transamerca	San Francnsico	87
636	Hanna Mining	Cleveland	87
637	Baltimore L'shoremen	Baltimore	86
638	Blue Bell Inc	Greensboro, NC	86
639	West. Wa. Carpenters	Seattle	86
640	So. Ca. Plasterers	Los Angeles, Ca	86
641	Jim Walter	Tampa, Fl	86
642	White Motor	Eastlake, Oh,	86
643	H.J. Heinz	Pittsburgh, Pa	85
644	National Gypsum	Dallas, Tx	85
645	Signode Corp	Glenview, Il	85
646	So. Ca. Rapid Transit	Los Angeles, Ca	85
647	Rohr Inc	Chula Vista, Ca	85
648	Chicago Sanitary	Chicago, Il	85
649	Wallace-Murray	New York, NY	84
650	McDonough Co	Parkersburg, WV	84
651	Seaboard Line	Richmond, Va	84
652	Sandoz, Inc.	East Hanover, NJ	83
653	Cone Mills	Greensboro, NC	83
654	Milliken	Spartanburg, SC	83
655	Superior Oil	Houston, Tx	83
656	AFTRA	New York	83
657	Anderson, Clayton	Houston, Tx	83
658	Great North Nekoosa	Stamford, Ct	83
659	Birmingham Systems	Birmingham, Al	82
660	Kansas City Funds	Kansas City, Mo	82
661	Teamsters, (#420)	Los Angeles	82
662	Baxter Travenol	Deerfield, Il	81
663	Thiokol Corp	Newtown, Pa	81
664	Burlington Northern	St. Paul, Mn	81
665	Rochester G&E	Rochester, NY	81
666	Sheet Metal Workers	Washington, DC	81
667	Hartford Employes	Hartford, Ct	81
668	Washington Gas	Washington, DC	80
669	Cleveland Carpenters	Cleveland	80
670	Hughes Tool	Houston	80
671	Nestle	White Plains, NY	80
672	Houston Inds	Houston	80
673	Brooklyn Union Gas	Brooklyn, NY	80
674	Washington Post	Washington, DC	80
675	Duquesne Light	Pittsburgh	79
676	Central Telephone	Chicago	79
677	Dallas Police & Fire	Dallas	79
678	Illinois Power	Decatur, Il	79
679	Baton Rouge Employes	Baton Rouge, La	79
680	Coastal States Gas	Houston	78
681	Bell & Howell	Chicago	78
682	Federal-Mogul	Detroit	78
683	Norfolk Employes	Norfolk, Va	78
684	Louisiana Pacific	Portland, Or	78
685	Potomac Electric	Washington, DC	77
686	Brown Group	St. Louis, Mo	77
687	Sybron Corp	Rochester	76
688	Oklahoma Natural Gas	Tulsa	76
689	Amer. Hospital Supply	Evanston, Il	76
690	Nalco Chemical	Oak Brook, Il	76
691	Jos. Schlitz	Milwaukee	76
692	Texas Gas	Owensboro, Ky	76
693	Engelhard Minerals	New York	76
694	Nat'l. Industrial	Newark	76
695	Fresno Employes	Fresno, Ca	76
696	Miami Beach Employes	Miami Beach	75
697	Hughes Air West	San Francisco	75
698	Armstrong Rubber	New Haven, Ct	75
699	Ma. Carpenters	Lexington, Ma	75
700	Castle & Cooke	San Francisco	75
701	Pittston Co	Greenwich, Ct	75
702	Roadway Express	Akron	75
703	Santa Barbara Employes	Santa Barbara, Ca	75
704	Standard Brands	New York	75
705	Tampa Retirement Funds	Tampa, Fl	75
706	Hiram Walker	Farm. Hills. Mi	75
707	Az. Public Service	Phoenix	75
708	San Diego Gas	San Diego	74
709	Tecumseh Products	Tecumseh, Mi	74
710	A.B. Dick	Chicago	74
711	Ambac Industries	Carle Place, NY	73
712	Revere Copper	New York	73
713	Cabot Corp.	Boston	73
714	William Wrigley	Chicago	73
715	Lukens Steel	Coatesville, Pa	73
716	Retail Employes	New York	72
717	Foster Wheeler	Livingston, NJ	72
718	Jacksonville System	Jacksonville, Fl	72
719	Gulf States Utils.	Beaumont, Tx	72
720	J.M. Huber	Edison, NJ	72
721	Illinois Tool	Chicago	72
722	Kerr-McGee	Oklahoma City	72
723	Shelby County System	Memphis, Tn.	72
724	Pacific Power	Portland, Or	72
725	Chicago Food Workers	Chicago	71
726	Mercantile Stores	New York	71
727	Southern Rail	Washington, DC	71
728	Commerce Clearing	Chicago	71
729	In. Public Service	Hammond, In	70
730	St. Paul Teachers	St. Paul	70
731	Food Workers Hq	Washington, DC	70
732	Oper. Engrs. (#825)	Newark, NJ	70
733	Service Employes	San Francisco	70
734	Marriott	Bethesda, Md	69
735	Wean United	Youngstown, Oh	69
736	United Energy Res	Houston	69
737	Cessna	Wichita, Ks	69
738	Becton, Dickinson	Paramus, NJ	68
739	Cultural Institutions	New York	68
740	N.Y. Hospitals	New York	68
741	Marmon Group	Chicago	68
742	Sheet Metal Workers	Los Angeles	67
743	Beech Aircraft	Wichita, Ks	67
744	Combustion Eng.	Stamford, Ct	67
745	ENSERCH Corp	Dallas	67
746	New Orleans Pub. Ser	New Orleans	67
747	Teamsters. (#807)	L.I. City, NY	67
748	Varian Associates	Palo Alto, Ca	67
749	Richardson-Merrell	Wilton, Ct	67
750	Oper. Engrs. (#324)	Detroit	67
751	Laborers, Nat. Headqtrs	Washington, DC	67
752	Acco Industries	Bridgeport, Ct	67
753	Knight-Ridder	Miami	67
754	Brockway Glass	Brockway, Pa	66
755	Litho & Photoeng.	New York	66
756	Potlatch.	San Francisco	66
757	Williams Cos	Tulsa, Ok	66
758	Field Enterprises	Chicago	65
759	Steelcase, Inc	Grand Rapids, Mi	65
760	Thomas J. Lipton	Englewood Cliffs, NJ	65
761	Dravo Corp	Pittsburgh	65
762	So. Ca. Meat Cutters	Los Angeles	65
763	Hammermill Paper Inc	Erie, Pa.	65
764	Houdaille Inds	Fort Lauderdale	65
765	Indian Head	New York	65
766	N.J. Iron Workers	Newark	65
767	St. Louis Firemen	St. Louis, Mo	65
768	Warner & Swasey	Cleveland	65
769	YWCA Fund	New York	65
770	MCA, Inc	Universal City, Ca	64
771	Cyclops Corp	Pittsburgh	64
772	Gerber Products	Fremont, Mi	64
773	Providence Emplys	Providence	64
774	Miles Labs	Elkhart, In	64
775	Amerada Hess	New York	63
776	Arlington County	Arlington, Va	63
777	Springs Mills	Fort Mill, SC	63
778	Copperweld Corp	Pittsburgh	63
779	So. Ohio Iron Workers	Dayton	63
780	Tacoma Employes	Tacoma, Wa	63
781	Coats & Clark	Stamford, Ct	63
782	Johnson & Higgins	New York	63
783	Lowe's Companies	N. Wilkesboro, NC	62
784	San Diego Carpenters	Los Angeles	62
785	Phila. Iron Workers	Philadelphia	62
786	Marin County Employes'	San Rafael, Ca	62
787	Oklahoma G&E	Oklahoma City	62
788	Howmet Corp	Greenwich, Ct	62
789	Foxboro Co	Foxboro, Ma	62
790	Carolina P&L	Raleigh	62
791	Raymond Int'l	Houston	61
792	Hearst Corp.	New York	61
793	Kendall Company	Boston	61
794	Stanley Works	New Britain, Ct	61
795	N.Y. Bricklayers	New York	61
796	Cameron Iron Works	Houston	61
797	Seventh Day Adventists	Plainfield, NJ	61
798	GATX Corp	Chicago	60
799	Shenango Furnace	Pittsburgh	60
800	Auto Workers, (#155,#157)	Dearborn	60
801	Columbus & So. Ohio Elec.	Columbus, Oh	60
802	Dan River	Greenville, SC	60
803	Equifax	Atlanta	60
804	Keystone Consol	Peoria, Il	60
805	Oakland County Employes	Pontiac, Mi	60
806	Sverdrup/ARO, Inc	Tullahoma, Tn	60
807	Teamsters, Local #337	Detroit	60
808	Mohasco Corp.	Amsterdam, NY	60
809	Electrical Workers (#134)	Chicago	60
810	Teamsters Local #282	Elmont, NY	60
811	Viacom International	New York	60
812	Frontier Airlines	Denver	60
813	Rochester Tel	Rochester, NY	59
814	Butler Mfg	Kansas City	59
815	Fairfax Country	Fairfax, Va	59
816	Kansas City Pub. School	Kansas City	59
817	Midland-Ross	Cleveland	59
818	Vulcan Materials	Birmingham, Al	59
819	Dayton P&L	Dayton	59
820	Bucyrus-Erie Co	So. Milwaukee	58
821	Square D Co	Palatine, Il	58
822	BASF Wyandotte	Parsippany, NJ	58
823	Digital Equipment	Maynard, Ma	58
824	Walter Kidde Inc	Clifton, NJ	58
825	Teamsters, Local #701	North Brunswick, NJ	58
826	Morton-Norwich	Chicago	58
827	Ar. State Highway	Little Rock	58
828	Newmont Mining	New York	58
829	Western Publishing Inc	Racine, Wi	57
830	Flintkote	Stamford, Ct	57
831	Plumbers Local #638	New York	57
832	Texas Utilities	Dallas	56
833	GK Technologies	Greenwich, Ct	56
834	Tiger International	Los Angeles	56
835	Auto Workers, Nat'l. Hq	Detroit	56
836	Barnes Group	Bristol, Ct	56
837	Black & Decker	Towson, Md	56
838	Courier-Journal	Louisville, Ky	56
839	Sheller-Globe	Toledo	56
840	Laborers, Local #731	New York	56
841	Massey-Ferguson	Des Moines	55
842	So. Ca. Drug Employers	Los Angeles	55
843	Wichita Retire. Funds	Wichita	55
844	Automation Inds	Los Angeles	55
845	San Fran. Meat Cutters	San Francisco	55
846	Gannett	Rochester	55
847	Inmont Corp	New York	55
848	Louisville G&E	Louisville, Ky	55
849	Syracuse Oper. Engrs	Syracuse, NY	55
850	Tribune Co	Chicago	55
851	AICPA	New York	55
852	El Paso Pension Funds	El Paso, Tx	54
853	Alexander & Baldwin	Honolulu	54
854	Continental Grain	New York	54
855	Gamble Alden Life	Minneapolis	54
856	Acme-Cleveland	Cleveland	54
857	Heublein	Farmington, Ct	54
858	Wisconsin Pub. Serv	Green Bay, Wi	54
859	So. Ca. Lumber Industry	Los Angeles	54
860	Interpace Corp	Parsippany, NJ	53
861	Mobay Chemical	Pittsburgh	53
862	Automotive Ind	Oakland, Ca	53
863	Lone Star	Greenwich, Ct	53
864	Western Metal	Seattle	53

Top 100 profiles

Continued from page 12
trustee. No investment consultant is used.

P.G. Chenault is the general manager-investment management and J.R. Whitehurst is manager-investment administration.

Atlantic Richfield Co.

	($ millions)
Total assets	1,420
Employer contributions	120
Benefit payments	95

LOS ANGELES—Atlantic Richfield Co., 64th among the Top 100 funds, and 31st among the Top 100 corporate funds, added four new money managers this year, all for international investments.

They are: Capital Guardian Trust, Los Angeles; Warburg Investment Management International, New York, G.T. Capital Management, San Francisco, and Fiduciary Trust Co. of New York.

The new firms are in addition to seven who share management of approximately $1.020 billion of the fund's $1.420 billion in assets.

Besides the three new money managers the following manage ARCO pension funds: Morgan Guaranty New York; Bank of New York; First National Bank in Dallas; Fischer, Francis, Trees & Watts; Brown Brothers Harriman and Alliance Capital Management, New York, and Trust Co. of the West, Los Angeles.

The total assets represent 58 plans, the largest being Atlantic Richfield Retirement Plan with assets of $744 million; Anaconda Salaried Retirement Plan with assets of $233 million; Atlantic Richfield Thrift Plan with assets of $195 million and Anaconda Hourly Retirement Plan with assets of $66 million.

Approximately $400 million of the fund's total assets is managed internally, an increase of $75 million from 1978.

As of Sept 30, 50% of the total assets was invested in equities, 34% in bonds, 15% in cash/equivalents and 1% in real estate.

Overseas investments accounted for $30 million of the funds' pension assets.

ARCO has $50 million in guaranteed return contracts but does not write options against equity holdings nor use financial futures. There is no outside consultant.

State Street Bank & Trust, Boston, was hired as master trustee effective February 1980.

Key executives responsible for overseeing investment management and administration of the funds are Howard H. Ockelmann, investment officer; Daniel W. Woolley, manager pension equity investment; David A. Homstreet, manager, private placement investment and David B. Gendron, director of administration.

Bell Telephone Co. of Pennsylvania

	($ millions)
Total assets	888
Employer contributions	123*
Benefit payments	38*

*estimate

PHILADELPHIA—The pension assets of Bell of Pennsylvania increased almost 22% to $888 million between Sept. 30, 1978 and Sept. 30, 1979.

This would rank the fund 94th among the Top 100 and 52nd among corporate plans.

The administration of the fund remained virtually unchanged during the year as the 10 managers remained: David L. Babson & Co., Boston; Bankers Trust Co., Brown Brothers Harriman & Co., F. Eberstadt & Co., Equitable Life Insurance Society of the U.S., all New York; FMR Investment Management Service Inc., Boston; Lord, Abbett & Co., New York; Philadelphia National Bank; Pioneering Management Corp., Boston; and State Street Research & Management, Boston.

The asset mix for the fund was 60% common stocks and 40% bonds.

The fund uses no foreign investments, financial futures, options, or GICs, and does not index any assets.

J. A. Bobrowski, assistant treasurer, is the key executive overseeing the fund.

The Bell System Employe Savings Plan

	($ millions)
Total assets	2,350
Employer contributions	170
Employe contributions	375

NEW YORK—The Bell System Employe Savings Plan (BSSP), which covers employes in all Bell System subsidiaries, is centrally administered by AT&T. Among the Top 100, the fund ranks 31st.

The plan is available to all salaried employes and offers participants four different investment vehicles: AT&T stock, a diversified equity portfolio, a government obligations portfolio, and a guaranteed return contract (GIC), or combinations of the above.

Of the total BSSP assets, $1.2 billion is in AT&T stock, $350 million is in government obligations, $800 million is in diversified equities. The GIC will be offered as an alternative in 1980.

The managers for the diversified equity portfolio are: Bankers Trust Co., Brown Brothers Harriman & Co., and Equitable Life Assurance Society of the U.S., all in New

Where P&I got its data

THE INFORMATION on the 1,000 leading fund sponsors identified in this issue of *Pensions & Investments* and the more detailed profiles of the Top 100 funds/sponsors was developed in several stages by the *P&I* editors.

Money Market Directory Inc., Charlottesville, Va., which annually publishes detailed information on more than 10,000 tax-exempt funds in the MMD or "Green Book" as it is known in the investment industry, furnished *P&I* with the identities and asset values of approximately 1,100 fund sponsors in three classifications: corporate (nonfinancial), state and local government fund sponsors and Taft-Hartley and union funds. From this list the Top 100 and the Top 1,000 were identified.

The information for funds 1-100 (see profiles beginning on page 11) was obtained via questionnaires and personal interviews with officials and executives at those fund sponsoring organizations.

In most cases, the information in the profiles reflects figures for Sept. 30, 1979 or later. In a few cases, however, fund sponsors were unable to give *P&I* asset figures as of that date, but instead furnished figures for yearend 1978.

In those cases *P&I* has estimated asset values as of September 30 by using the yearend 1978 figure, and the asset mix figure, and adjusting the holdings of various classes of assets by factors representing the 1979 average investment results through September. For example, the equity holdings were adjusted upwards by 18%, and the bond holdings by 5.4%. To the new total asset figure was added 75% of the annual contribution. This figure was then checked against similar funds to check its validity. Where no asset mix or contribution figures were available estimates were based on changes in similar funds. ■

Ranking of funds/sponsors 101-1,000

No.	Company/Sponsor	Location	Assets ($ Mils.)
865	Dow Jones	New York	53
866	Young & Rubicam	New York	53
867	Sheet Metal Workers	Oakland, Ca	52
868	Sanders Associates	Nashua, NH	52
869	Zale Corp	Dallas	52
870	Capital Cities	New York	52
871	Bausch & Lomb	Rochester	52
872	A-T-O Inc.	Willoughby, Oh	52
873	Burroughs Wellcome	Triangle Pk., NC	52
874	Omaha Power	Omaha	52
875	Perkin-Elmer	Norwalk, Ct	52
876	Utah P&L Company	Salt Lake City	52
877	Crown Cork & Seal Inc.	Philadelphia	52
878	Northwest Inds	Chicago	52
879	Southwestern Pub. Serv.	Amarillo, Tx	52
880	Texas P&L	Dallas	52
881	Trane Co.	La Crosse, Wi	52
882	Prentice-Hall	Englewood Cliffs, NJ.	51
883	Sonoma County	Santa Rosa, Ca	51
884	Sperry and Hutchinson	New York	51
885	New Orleans Employs	New Orleans	51
886	Food Workers (#174)	New York	51
887	Pub. Serv. of Indiana	Plainfield, In	50
888	A.C. Nielsen	Northbrook, Il	50
889	Pontiac Retirement	Pontiac, Mi	50
890	Molders. Allied Workers	Cincinnati	50
891	Ogden Corp	New York	50
892	Wisconsin Gas	Milwaukee	50
893	Illinois Carpenters	Geneva, Il	50
894	DeKalb AG Research	DeKalb, Il	50
895	D.C. Government	Washington, DC	50
896	Seattle Food Workers	Seattle	50
897	Hotel Emps.,	West. Pa	50
898	IU International	Philadelphia	50
899	Peavey Co	Minneapolis	50
900	Rubbermaid	Wooster, Oh	50
901	New England Gas	Cambridge, Ma	50
902	Cenex	So. St. Paul, Mn	50
903	Simpson Timber	Seattle	50
904	Case-Swayne	Santa Ana, Ca	50
905	CertainTeed	Valley Forge, Pa	50
906	Omaha School Employes	Omaha	50
907	Stanislaus Cty. Employes	Modesto, Ca	50
908	Salt River Project	Tempe, Az	49
909	Robertshaw Controls	Richmond, Va	49
910	Western Auto	Kansas City, Mo	49
911	Central Il. Pub. Serv	Springfield, Il.	49
912	Hershey Foods	Hershey, Pa	48
913	Bricklayers Intl.	Washington, DC	48
914	Andersen Corp	Bayport, Mn.	48
915	Harsco Corp	Camp Hill, Pa	48
916	Ideal Basic Inds	Denver	48
917	Lathers. Local #46	New York	48
918	Amer. Fed. of Musicians	New York	48
919	National Machinery	Tiffin, Oh	48
920	Wheelabrator-Frye	Hampton, NH	48
921	Dillingham	Honolulu	48
922	Central Il. Light	Peoria, Il	48
923	Interco Inc	St. Louis, Mo	48
924	Gas Service Co	Kansas City, Mo	47
925	N.Y. Stock Exchange	New York	47
926	G.D. Searle	Skokie, Il.	47
927	Wyman-Gordon	Worcester, Ma	47
928	Toledo Edison	Toledo	47
929	Hawaiian Electric	Honolulu	47
930	Machinists Local #701	Chicago	47
931	Westpoint Pepperell	West Point, Ga	47
932	Graniteville Co	Graniteville, SC	47
933	Teamsters, (#83)	Richmond, Va.	47
934	Piedmont Aviation	Winston-Salem, NC	47
935	Insilco Corp	Meriden, Ct.	47
936	Hotel Trades N.Y.	New York	46
937	Richmond Ret. Syst.	Richmond, Va.	46
938	Sealed Power Corp	Muskegon, Mi	46
939	Clothing & Textile Workers	New York	46
940	Mason Tenders	New York	46
941	Lubrizol Corp.	Wickliffe, Oh	46
942	Pickands Mather	Cleveland	46
943	Service Employes (#32B)	New York	46
944	Indianapolis P&L	Indianapolis	46
945	Electrical Workers (#1186)	Honolulu	46
946	MAPCO	Tulsa, Ok	46
947	Kansas City P&L	Kansas City, Mo	45
948	Lehigh Portland Cement	Allentown, Pa	45
949	Ma. Laborers	Newton, Ma	45
950	Mesta Machine	W. Homestead, Pa	45
951	Johnson Controls	Milwaukee	45
952	Allegheny Cty, Empls	Pittsburgh, Pa	45
953	American Petrofina	Dallas	45
954	Central Newspapers Ret. Tr	Indianapolis	45
955	Hobart Corp	Troy, Oh	45
956	Witco Chemical	New York	45
957	Federal Paper Board In.	Montvale, NJ	45
958	Oakland Utilities	Oakland, Ca	45
959	Scovill	Waterbury, Ct	45
960	Tyler Corp	Dallas	44
961	Kansas City Police	Kansas City, Mo	44
962	E.W. Scripps	Cincinnati, Oh	44
963	Amer. Home Prods	New York, NY	44
964	Consolidated Papers	Wisconsin Rapids, Wi	44
965	Des Moines Teachers'	Des Moines	44
966	Puget Sound P&L	Bellevue, Wa	44
967	Texas Electric Serv	Fort Worth, Tx	44
968	Control Data	Minneapolis	44
969	Alaska Laborers	Anchorage	44
970	Masonite	Chicago	44
971	Media General	Richmond, Va.	44
972	Harnischfeger	Milwaukee	44
973	Bulova Watch	Flushing, NY	43
974	Credit Union Nat. Assn	Madison, Wi	43
975	So. Nevada Culinary	Las Vegas	43
976	Joslyn	Chicago	43
977	McLouth Steel	Detroit	43
978	Ca. Metal Trades	San Francisco	43
979	Stanadyne	Windsor, Ct.	43
980	American Broadcasting	New York	43
981	Laborers Local #253	Jacksonville, Il	43
982	Woodward Governor	Rockford, Il	42
983	Laclede Gas	St. Louis, Mo	42
984	Arizona Laborers	Phoenix	42
985	McCormick & Company	Hunt Valley, Md	42
986	Or.-Wa. Carpenters	Portland, Or	42
987	Ca. Iron Workers	San Francisco	42
988	United Engineers	Philadelphia	42
989	Retail Clerks	Madison Heights, Mi	42
990	Associated Press	New York	42
991	Campbell Taggart	Dallas	42
992	Eastern Gas & Fuel	Boston	42
993	Mo. Farmers Assn	Columbia, Mo	42
994	San Antonio Fire & Police	San Antonio, Tx	42
995	Sunshine Biscuits	New York	42
996	Fiat-Allis	Deerfield, Il	42
997	Trans Union Corp	Lincolnshire, Il	42
998	North Dakota Empls'	Bismarck	42
999	McKinsey & Co	New York	41
1000	N.Y. Oper. Engineers	New York	41
	Total		**152,798**

York. Bankers Trust and Brown Brothers Harriman also manage the government obligations portfolio.

Three insurance companies will be involved in the GIC alternative: Aetna Life & Casualty Co., Hartford, Metropolitan Life Insurance Co., New York, and Prudential Insurance Co., Newark.

J.W. English, director-pension fund administration at AT&T, explained that the company contributes 50 cents for every $1 contributed by the participant annually, up to 6% of the participant's salary.

For 1979, employe contributions into the BSSP were $375 million. Employer contributions were $170 million. At year end, 1978, the savings plan assets were $2.15 billion.

In 1979, a Savings and Security Plan (SSP) was introduced for hourly workers. That plan contains two options: a guaranteed interest fund, AT&T stock, or a combination of both.

This plan has $375 million in assets. Of that total, $100 million is in the guaranteed interest fund, and the remainder is in AT&T stock.

The plan works on the same contribution formula as the BSSP. However, with the BSSP the company's contribution goes into whatever option the salaried employer chooses. With the Savings and Security Plan for the hourly employe, the company's contribution goes into AT&T sotck.

The insurance carriers for the SSP are Aetna, Connecticut General Life Insurance Co., Bloomfield, Ct., and Metropolitan Life.

Bethlehem Steel Corp.

	($ millions)
Total assets	1,926*
Employer contributions	315*
Benefit payments	233*

*estimate

BETHLEHEM, PA.—*Pensions & Investments* estimates pension assets of the Bethlehem Steel Corp. and subsidiary companies were $1.926 billion, as of Sept. 30, 1979, up from $1.312 billion a year earlier.

As of June 30, 1979 the assets were $1.5 billion according to the company.

Bethlehem Steel ranked 45th among the 100 largest fund sponsors as of Sept. 30, 1979 and 21st among corporate funds in the Top 100.

P&I estimates employer contributions in 1979 were $315 million and benefit payments were $233 million.

Employer contributions for 1978 were $284.4 million, and benefits to retirees totaled $209.8 million.

All assets are internally managed.

Bethlehem Steel does not index any assets, nor does it write options against any equity holdings.

The company does not invest in financial futures, or in foreign markets. As of Sept. 30, 1979, about $60 million was in GICs—"not much more than last year" the company reported.

Asset allocation as of Sept. 30, 1979 was 65% stocks, 28% bonds, 7% cash/equivalents.

The firm does not use a master trustee or an investment management consultant.

Davis T. Dunbar is the pension fund manager.

Boeing Co.

	($ millions)
Total assets	2,169
Employer contributions	80*
Benefit payments	36

*estimate

SEATTLE—Pension assets of the Boeing Co. increased $169 million to $2.167 billion during the 12 months ended Sept. 30, 1979, ranking Boeing 35th among the 100 largest fund sponsors. Among corporate funds in the Top 100 Boeing ranked 15th.

The assets are held in four plans including the Boeing Co. Employes Retirement Plan with $1.34 billion, the Boeing-Vertol Employes Retirement Plan with $36 million, the Boeing Profit Sharing Plan with $645 million and The Financial Security Plan with $145 million.

The four plans have a total of 21 outside money managers, including: Alliance Capital Management; Bankers Trust Co.; Brown Brothers Harriman & Co.; Capital Guardian Trust; Century Capital Assoc.; Chase Manhattan; Citibank; Crocker Investment Management; FMR; IDS; MacKay-Shields; Morgan Guaranty; Provident National; Prudential; Rosenberg Capital Management; Seattle First National; Trust Co. of the West; Pringle, Flinn, Elvins &

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Donahoe; and Aetna and Pacific National, both named during 1979.

Although the fund has $236 million in GICs, none of the assets is indexed, in options or in the financial futures markets. However, the fund does have some $20 million invested in foreign markets.

The master trustee for the fund is Chase Manhattan Bank of New York. Frank Russell and Co. of Seattle serves the fund as the investment management consultant.

Although the fund is managed by an investment committee of three, the chief investment officer for the fund is Gary Bland.

California Public Employes

	($ millions)
Total assets	17,958
Employer contributions	2,280*
Benefit payments	1,103*

*As of fiscal year ending 6/30/79

SACRAMENTO—With assets totaling $17.958 billion as of August 31, the State of California's two major retirement funds, the State Teachers' Retirement System and the Public Employes' Retirement System, ranked 1st among the top 100 fund sponsors. Among state and local government funds the combined funds ranked 1st.

While both funds are considered separate and distinct by California officials they are combined above because they are administered and managed from one office here and investments are overseen by the same officials. If listed separately the Teachers' fund would have ranked 6th overall, and the Public Employes fund would have ranked 5th.

The total above consists of $6.5 billion in Teachers fund assets and $11.4 billion in the public fund.

Both funds are managed internally with consultants used "only on an advisory basis," according to Walton R. Williams, principal investment officer. Scudder, Stevens & Clark is the consultant on the teachers' fund and the public employes fund is advised by Citibank, N.A. New York.

The teachers' fund doubled the size of its equity investments in 1979, from approximately 6% to 12.2% of total assets as of July 31. Bonds represented 56.9% of total assets, real estate 26.7% and cash/equivalents represented 4.2%.

The public employes' fund equity exposure is considerably higher; 23.4% of total assets are in stocks (state law prohibits more than 25% investment in stocks); bonds represent 48.4% total assets, real estate 25.7% and cash/equivalents 2.5%.

Assets in the two funds are neither indexed nor are they invested in guaranteed return contracts.

The funds do not use options or financial futures.

The funds both have a small portion of assets invested in Canada, primarily in bonds (U.S. dollar denominated). The fund has $197 million invested in Canada while the public employes Canadian investments totaled $319 million.

As mandated by state law, the California State Treasurer is the master trustee for the funds.

Key personnel involved in overseeing investment management and administration of the funds are: Melvin W. Peterson, chief of investments; Walton R. Williams, William E. McCallum, Carl C. Wilberg and Edward T. Bradford, all principal investment officers and Wendell J. Smith, real estate mortgage loan officer.

Caterpillar Tractor Co.

	($ millions)
Total assets	1,400
Employer contributions	na
Benefit payments	na

PEORIA—M.W. Coon replaced Harvey Masimore as manager of employe benefits for Caterpillar Tractor Co. last October when Mr. Masimore transferred to Tokyo.

In addition, late this year the company's noncontributory pension plan covering hourly union employes was declared 'not qualified' for favorable tax treatment by U.S. Tax Court. The company has not not yet decided whether to appeal.

And, Institutional Capital Corp., Chicago, was hired by the company as an investment manager.

Pension assets of Caterpillar grew by only 3% during the 12 months ended September 30, 1979.

With total assets of $1.4 billion, the company's fund ranked 66th as of that date among the 100 largest fund sponsors. Among corporate funds in the top 100, Caterpillar ranked 32nd.

Investment managers for the company are: Chase Investors Management Corp., Citibank, Equitable Life Assurance, Morgan Guaranty Trust, Fischer, Francis, Trees & Watts Inc. and Jennison Associates Capital Corp., all of New York; FMR Investment Management, Boston; and First National Bank of Chicago and Institutional Capital Corp., both of Chicago.

As of September 30, the asset mix was 60% in stocks, 24% in bonds, 12% in cash equivalents and 4% in real estate.

The Frank Russell Co. acts as investment consultant to the fund.

None of the assets is managed internally, indexed, invested overseas or in guaranteed investment contracts.

The fund does not use options or financial futures.

The Northern Trust is the master trustee for the fund.

The key executive responsible for the administration of the asset management is Ms. Coon.

Chrysler Corp.

	($ millions)
Total assets	2,014*
Employer contributions	256
Benefit payments	210

*estimate

DETROIT—Chrysler Corp. began the year in a weakened financial condition and ended 1979 as the potential recipient of the largest federal loan guaranty program for a private corporation in U.S. history.

Due to its weakened financial condition, the Chrysler pension fund was also subject to an assortment of social investing provisions which were negotiated during the 1979 contract talks with the United Auto Workers.

Specific provisions of the social investing plan saw 10% of new net contributions placed into health maintenance organizations, mortgages, day care centers and a stock review procedure.

With total assets of $2.01 billion, the fund ranked 42nd among the Top 100 and 19th among the corporate funds.

Assets are divided among four plans: the UAW Pension Plan, $838 million; the Salaried Employes Retirement Plan, $383 million; the Chrysler Corp. Pension Plan, $253 million; and the Chrysler Corp. Thrift Stock Ownership Plan, $100 million.

Assets of the plans as of Dec. 31, 1978 showed 58% stocks, 21% bonds, 18% cash equivalents and 2% real estate.

There was $25 million in GICs in the Thrift Stock Ownership Plan only on Dec. 31, 1978.

About $24 million was invested in foreign markets and $900,000 in an options program as of Dec. 31, 1978.

None of the funds is managed internally, indexed, or in a financial

futures program.

Managers for the plan are the same as last year. For the UAW plan they are: Alliance Capital Management Corp., New York; BA Investment Management Corp., San Francisco; Chase Investors Management Corp., New York; Detroit Bank and Trust Co.; Endowment Management & Research Corp.; Boston; Manufacturers Hanover Trust Co., New York; Morgan Guaranty Trust Co., New York and the National Bank of Detroit.

For the salaried employes plan: Detroit Bank and Trust Co.; Manufacturers Hanover, National Bank of Detroit, and Prudential Insurance Co. of America, Boston.

For the Chrysler Corp. employes plan the managers are: Manufacturers Hanover and the National Bank of Detroit.

Key executives of the fund are E.M. Scranton, assistant treasurer; Roy S. Good, manager, investment review and special financing; and R.K. Alverson, manager, pension fund administration.

Colorado Public Employes Retirement Assn.

	($ millions)
Total assets	1,815
Employer contributions	139
Benefit payments	61

DENVER—Pension assets for the Colorado Public Employes Retirement Assn. escalated 15%—$239 million—for the year ended Sept. 30, 1979.

With total assets of $1.815 billion as of that date, the fund ranks 50th among the 100 largest sponsors and 22nd among the public employe funds profiled by *P&I*.

Assets are in one fund, which is managed internally. Alliance Capital Management Corp., San Francisco serves the fund as investment adviser.

As of September 30, the assets were 24% in stocks, 58% in bonds, 4% in cash and equivalents and 14% in real estate mortgages.

The assets are not indexed; there are no investments in guaranteed investment contracts or foreign holdings; the fund writes no options against equity holdings and does not use financial futures.

Joseph P. Natale, executive secretary and Kenneth E. Peterson, assistant executive secretary/investments continue as the key administrators for the state retirement association.

State of Connecticut Trust Funds

	($ millions)
Total assets	1,405
Employer contributions	236
Benefit payments	436

HARTFORD—Total employe benefit assets at the State of Connecticut Trust Funds were $1.405 billion as of September 30. Connecticut ranked 65th among the Top 100 fund sponsors profiled by *Pensions & Investments* and 30th among public funds.

The four largest funds are the Connecticut teachers' retirement fund, $1 billion in assets; the state employes' retirement fund, $253 million; the municipal employes' retirement fund, $107 million; and the Soldiers, Sailors & Marine fund, $31 million.

Employer contributions to all funds totaled $236 million during 1979. Benefits paid to retirees totaled $156 million.

The state retains seven outside investments advisers. They are: David L. Babson & Co. Inc., Boston; Bernstein-Macaulay Inc., New York; Capital Guardian Trust Co., Los Angeles; Connecticut Bank & Trust Co., Hartford; Harris Trust and Savings Bank, Chicago; National Investment Services of America Inc., Milwaukee; and Scudder, Stevens & Clark, Boston.

Harris and Scudder act as fixed-income advisers to Connecticut's in-house staff. M.D. More, investment officer of fixed income, heads up that area for the state funds. He joined the state in early November from the State of Wisconsin where he was an investment officer.

Connecticut manages $627 million internally, which consists of fixed income plus cash equivalents. The staff also invests about $250 million in short-term funds for various state and local agencies.

The asset mix for the total fund was 34% equities, 49% fixed income and 17% cash equivalents. The funds have boosted their equity investments and lowered their fixed income during the year. At the end of 1978 the equity component was 23% while the fixed in-

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come was 62%.

None of the assets is indexed or invested in foreign markets. The funds do not write options or use financial futures.

The state funds do have a securities lending program, which has been active since about 1974. Kathleen Fede handles the program for the funds.

Both Connecticut Bank & Trust and Hartford National Bank act as trustees.

Lee Van Meter is the deputy treasurer-investments. He was promoted in August when Charles T. Hunter, who held that position, left the state to join Brown Brothers Harriman & Co., New York. Other internal staff include Terry Helming, investment officer for short-term investments; Karen Kelleher, assistant investment officer, and George Neisloss, investment officer, equity trading.

Detroit Retirement Systems

	($ millions)
Total assets	1,336*
Employer contributions	160
Benefit payments	98.5

*estimate

DETROIT—The Detroit Retirement Systems increased its internal management of assets to $431 million, up considerably from its 1978 figure of about $50 million of its two retirement funds.

Assets at the two Detroit funds grew by 14% during the 12 months ended June 30, 1979.

Pensions & Investments estimates that total assets for the period ended Sept. 30, 1979 hit $1.336 billion, ranking the fund 69th as of that date among the 100 largest fund sponsors. Among public funds in the *P&I* Top 100, the Detroit systems ranked 32nd. The systems had assets totaling $1,276 million as of June 30, 1979.

The city system is the largest of the two funds totaling $689.3 million as of June 30. The police and fire system had assets of $587.5 million as of that date.

City National Bank of Detroit and Merrill Lynch Hubbard, (real estate) N.Y., were hired as managers this year for the police and fire system. Other managers for that system are: The Boston Company, Boston; Loomis Sayles & Co., N.Y.; and Funds Advisory, Houston.

Money managers for the city system are: Detroit Bank & Trust Co., Scudder Stevens & Clark, and Alliance Capital Management, both N.Y.

The asset mix as of September 30 was 18.6% stocks, 36.8% bonds, 18.5% cash/equivalents, one-tenth of one percent real estate and 26% other.

Those figures include about $195 million invested in guaranteed investment contracts and $31.9 million in foreign holdings. None of the assets are indexed or invested in financial futures, and the systems do not write options. There is no master trustee.

The key executive responsible for administering the assets is Fred Murphy, executive secretary.

E.I. DuPont de Nemours

	($ millions)
Total assets	4,205
Employer contributions	528
Benefit payments	294

WILMINGTON, DE.—DuPont, which manages most of its assets of $3.6 billion internally, began to include financial futures among its investments in 1979.

However, the company, the pension assets of which had climbed 18% by Sept. 30, 1979 over the Sept. 30, 1978 figure, would disclose no details of the futures program.

The DuPont pension assets include the $3.4 billion DuPont plan plus the $185 million Remington Arms plan. DuPont also has a thrift plan with an estimated $597 million in assets (as of December 1978).

With total employe benefit assets of $4.205 billion, DuPont ranked 18th among the Top 100 fund sponsors and 7th among corporate sponsors.

Employer contributions to all plans was $528 million and benefits paid out were $294 million.

While the pension assets are managed inhouse, the thrift plan is managed by Bankers Trust Co., New York (equities), and Equitable Life Assurance Society Co., New York (fixed income).

The portion of the thrift plan assets managed by Equitable includes $352 million in guaranteed income contracts.

None of the assets is invested in foreign markets and DuPont does not use options.

The asset mix for the total funds as of September 30 was approximately 60% equities, 10% fixed income, and 30% cash equivalents.

DuPont does not use an outside investment management consultant.

Mr. Marvin heads the pension fund investment department and A. Herbert Nehrling Jr. is director, employe compensation and benefits division within the finance department.

Eastman Kodak Co.

	($ millions)
Total assets	2,442*
Employer contributions	230*
Benefit payments	95*

*estimate

ROCHESTER, N.Y.—*Pensions & Investments* estimates that employe benefit assets at Eastman Kodak Co. totaled $2.442 billion as of Sept. 30, 1979.

Contributions for 1979 are estimated by *P&I* to be about $230 million, and benefit payments about $95 million.

As of Dec. 31, 1978, assets were $2.048 billion, with 1978 contributions at $207 million and benefit payments of $86 million. Of the total asset figure, $1.713 billion was from the Kodak Retirement Income Plan; $328 million from the Eastman Kodak Employes' Savings and Investment Plan, and the remainder was from minor plans.

During 1979, Eastman Kodak terminated Lincoln First Bank of Rochester, N.Y.; Chase Investors Management Corp., and Bankers Trust, both of New York, and Putnam Advisory Co. Inc., Boston.

Aetna Life & Casualty Co., Hartford, Ct.; The Prudential Insurance Co. of America, Newark, N.J., and Neuberger & Berman Management Inc., New York, were named managers during 1979.

Other managers include: American National Bank and Trust of Chicago; F. Eberstadt & Co., Equitable Life Assurance Society of the U.S., Metropolitan Life Insurance Co., and Morgan Guaranty Trust Co., all in New York; T. Rowe Price Associates, Inc., Baltimore, and State Street Research & Management Co., Boston.

As of Sept. 30, 1979, Eastman Kodak ranked 30th among the 100 largest fund sponsors. Among corporate funds in the Top 100, Kodak ranked 12th.

None of the assets is managed inhouse, and "a significant amount" is indexed. At the end of December 1978, $127 million of the $328 million Eastman Kodak Employes' Savings and Investment Plan was in GICs.

The company invests "a small amount" in foreign markets, and does not write options against any equity holdings. It does not use financial futures.

As of Dec. 31, 1978, the asset mix of the funds was 44% stocks, 5% bonds, and 51% annuities.

Rogers, Casey & Barksdale, Inc., Stamford, Ct. is the investment management consultant for Eastman Kodak's fund, and Boston Safe Deposit & Trust Co. is the master trustee.

Donald E. Snyder, the treasurer, and Russell L. Olson, on the treasurer's staff, are involved in overseeing the investment management and administration of the fund.

Exxon Corp.

	($ millions)
Total assets	3,624*
Employer contributions	249
Benefit payments	142

*estimate

NEW YORK—Exxon Corp.'s internally managed pension assets jumped to $957 million as of June 30, 1979—an increase of $256 million.

Of that total, $421 million in pension assets are managed in an inhouse index fund.

As of June 30, 1979, Exxon's total employe benefit assets were $3.441 billion, with $2.296 billion in the Annuity Plan and $1.145 billion in the Savings Program. The company estimates that employer contributions in 1979 were $249 million, while pension benefit payments were estimated at $142 million.

With total assets as of Sept. 30, 1979 estimated by *P&I* at $3.624 billion, Exxon's fund ranked 22nd among the 100 largest fund sponsors. Among corporate funds in the *P&I* Top 100, Exxon Corp. ranked 8th.

As of June 30, 1979, Exxon was writing $5 million on options in an inhouse discretionary fund. Last year, the company did not write any options.

Equity managers for Exxon are: Chase Manhattan Bank, Citibank, and United States Trust Co., all in New York; First City National Bank of Houston, and Republic National Bank of Dallas. Morgan Guaranty Trust Co., New York, manages an equity fund for the Savings Program.

Scudder, Stevens & Clark, New York, and State Street Research & Management Co., Boston, are bond managers. Exxon has annuity contracts with: The Travelers Life Insurance Co., and Aetna Life & Casualty Co., both in Hartford; John Hancock Mutual Life Insurance Co., Boston; Prudential Insurance Co. of America, Newark, and Equitable Life Assurance Society of the U.S., New York.

Exxon has a "negligible" amount of assets invested in foreign markets, and has $270 million from its Savings Program invested in GICs. The company does not use financial futures as an investment medium.

Exxon does not use an investment management consultant or a master trustee.

As of June 30, 1979, the asset mix for the total pension fund was: 46% stocks; 42.5% bonds, 1.6% cash/equivalents, 7.5% real estate, and 2.4% in royalties.

Key personnel involved in overseeing the investment management and administration of the funds are: A.C. Hamilton, treasurer, administrator-finance; V.J. Motto, assistant treasurer, and C.W. Williams, manager, trust investments.

Florida State Board of Administration

	($ millions)
Total assets	3,090
Employer contributions	236
Benefit payments	180

TALLAHASSEE—The Florida State Board of Administration has been rocked by reports critical of its asset mix and performance.

The fund has been invested about 85% in bonds, and has felt the full brunt of the declining bond market. Because of the negative publicity, outside investment managers may be considered for the retirement fund, which has been completely managed internally.

According to the board, it is limited by law to having only 10% of assets in equities, and the assets now are invested 7% in equities and 8% in cash.

The board had assets of $3.090 billion at the end of September, up from $2.7 billion last year. The fund ranks 23rd in *Pensions & Investments*' Top 100 and 14th among public funds.

E. G. Frohboese is executive director of the board. Jon Goebel and M. R. Clements are investment specialists for equities, Victoria Marks is investment specialist for bonds and Carmen G. Hiers is investment specialist for short-term funds.

Ford Motor

	($ millions)
Total assets	4,900
Employer contributions	600
Benefit payments	300

DETROIT—Pension assets at Ford Motor Co. increased by $800 million—20%—for the year ending Sept. 30, 1979 to rank the second largest U.S. auto maker 9th in the Top 100 and 3rd among the corporate sponsors.

During 1979 Ford also moved $50 million to inhouse management.

Total pension assets of $4.9 billion were divided among three company plans. They are the Ford General Retirement Plan ($2.8 billion in assets), Ford-UAW Retirement Plan ($1.9 billion in assets) and the Retirement Plan of Ford Aerospace & Communications Corp. ($200 million in assets).

To manage the plans, Ford uses 16 managers, including Republic National Bank of Dallas, Wells Fargo Investment Advisors, San Francisco and Harris Trust, Chicago, which were added during 1979.

Other managers include Morgan Guaranty, Chase Investors Management Corp., Citibank, all New York, First National Bank of Boston, Alliance Capital Management, Brown Brothers Harriman & Co., both New York, FMR Investment Management Service Inc., Boston, Capital Guardian Trust Co., Los Angeles, Fayez Sarofim & Co., Houston, National Bank of Detroit, T. Rowe Price, Baltimore, Manufacturers National Bank of Detroit and State Street Research & Management, Boston.

In addition to the $50 million which was moved inhouse in 1979, Ford also has $250 million which is indexed and $100 million invested in foreign markets. An options account comprised of more than 1% of assets is also managed by Brown Brothers Harriman.

As of September 30, 74% of assets were in stocks; 16% in bonds; 8% cash equivalents and 2% real estate.

Ford has no legal master trustee because of an agreement with the United Auto Workers. However Manufacturers National Bank of Detroit performs all the functions of a master trustee.

Chief officers of the fund are John Sagan, treasurer; R.C. White, assistant treasurer; M.E. Maertens, manager, trust investment analysis department.

General Dynamics Corp.

	($ millions)
Total assets	1,125
Employer contributions	73
Benefit payments	14

ST. LOUIS—Pension assets at General Dynamics Corp. grew 21%

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during the 12 months ended September 30, 1979.

With total assets of $1.125 billion, the company's fund ranked 79th as of that date among the 100 largest fund sponsors.

Among corporate funds in the Top 100, General Dynamics ranked 41st.

The two largest funds are the retirement plans for salaried employes, with assets of $485 million, and the savings and stock investment plan for salaried employes, with $330 million in assets.

In addition, the company maintains the retirement plans for hourly employes, with $210 million in assets, and the savings and stock investment plan for hourly employes, with $100 million in pension assets.

Money managers for the funds remained unchanged during 1979, according to fund officials.

The corporate pension fund money managers are: Aetna Life & Casualty Co., Hartford; BA Investment Management Corp., San Francisco; George Bjurman & Associates, Los Angeles; Campbell Advisors Inc., N.Y., Chase Investors Management Corp., N.Y.; John Hancock Mutual Life Insurance Co., Boston; Lazard Freres & Co., N.Y., Metropolitan Life Insurance Co., N.Y.; Mutual of New York; Fayez Sarofim, Houston; St. Louis Union Trust; and Travelers Insurance Co., Hartford.

In addition, the plans have a guaranteed investment contract with Prudential Insurance Co., Newark.

Money mangers for the savings and stock investment plans are: Bankers Trust Co., N.Y.; George D. Bjurman & Associates, Los Angeles; Fayez Sarofim, Houston; and Delaware Investment Advisers, Philadelphia.

As of September 30, the asset mix was 27% stocks, 35% bonds (including GICs) and 38% cash/equivalents.

None of the assets is managed internally or is indexed.

The General Dynamics funds have no foreign holdings and do not use financial futures.

However, the funds do have a small portion of their assets in options.

Options writing is handled by the current managers.

In addition, the funds have about $215 million in GICs. Chase Manhattan is the master trustee.

Executives responsible for the administration of pension fund asset management are J.P. Maguire, secretary, and C.D. Walbrandt, director, employe benefit trust investments.

General Electric Co.

	($ millions)
Total assets	6,023
Employer contributions	359
Benefit payments	218

STAMFORD, CT.—Employe benefit assets at General Electric Co. totaled $6.023 billion as of Sept. 30, 1979, a gain of $858 million from the previous year's total of $5.165 billion.

The new asset figure includes $4.898 billion in General Electric Pension Trust; $1.095 billion in the General Electric Savings & Security Trust, and the General Electric Stock Bonus assets of $30 million.

Employer contributions to the pension trust for the 12 months ended Sept. 30, 1979 were $359 million and benefit payments for the pension trust were $218 million. As of Sept. 30, 1979, the fund ranked 7th among the largest 100 fund sponsors. Among corporate funds in the *P&I* Top 100, GE ranked 2nd.

An inhouse staff of 27 professionals are responsible for management of all pension assets. A total of $5.528 billion in assets are managed inhouse. The General Electric S&S Program Mutual Fund (included with the S&S Trust) is managed by Capital Guardian Trust Co., Los Angeles, and Morgan Guaranty Trust Co., New York.

As of Sept. 30, 1979, General Electric's asset mix was 63% stocks, 25% bonds, 7% cash/equivalents and 5% real estate.

General Electric does not index any assets, nor does it use a master trustee or investment management consultant.

None of its assets is in GICs, and a "negligible" amount is invested in foreign markets. As of Sept. 30, 1979, GE was writing options against 1% of its pension equity assets. Financial futures are not used as an investment medium.

E.H. Malone, vp; A.S. Bahr, manager-equities; E.B. Griswold, manager-fixed income, and W.R. Fulljames, treasurer of all funds, are responsible for the administration of the funds.

General Motors Corp.

	($ millions)
Total assets	12,973
Employer contributions	1,337
Benefit payments	848

NEW YORK—General Motors Corp. underscored a commitment to equities by changing the guidelines for its managers allowing them to boost their equity ratios to 70% on a market value basis from the 50% level which was calculated on an adjusted cost basis.

General Motors also appointed three additional money managers effective March 1. They are AmeriTrust, Cleveland, American National Bank & Trust Co. of Chicago, and Wells Fargo Investment Advisors, San Francisco. GM will allocate $350 million over a one year period to the active managers, AmeriTrust and Wells Fargo. Another $350 million will be given to the passive managers, American National and Wells Fargo.

General Motors Corp. estimates that its total assets increased by more than $1 billion—to $12.973 billion—for the 12 months ended Sept. 30, 1979.

As of Sept. 30, 1979, assets were $11.5 billion.

The new asset figure includes $5.33 billion in the Hourly Rate Pension Plan; $5.643 billion in the Salaried Retirement Program, and $2 billion in the Savings-Stock Purchase Program.

General Motors ranked 3rd as of September 30 among the 100 largest fund sponsors. Among corporate funds in the Top 100, General Motors ranked 1st.

GM's other managers are: Bank of America, San Francisco; Bankers Trust, Citibank, Chase Manhattan Bank and Morgan Guaranty Trust Co., all New York; First National Bank of Boston; First National Bank of Chicago; Harris Trust & Savings Bank, Chicago; Mellon Bank, Pittsburgh, and National Bank of Detroit.

In addition, GM has Immediate Participation (IPG) contracts with Aetna Life & Casualty Co., Hartford; Metropolitan Life Insurance Co., New York, and Prudential Insurance Company of America, Newark.

Excluding the IPG investments, GM's asset mix as of Sept. 30, 1979, was 51% stocks, 35% bonds, cash/equivalents 11%, real estate (includes mortgages) 2%, and other 1%.

None of General Motors' assets is internally managed, and none is invested in foreign markets or financial futures. No options are written, and the corporation does not use a master trustee, or an investment management consultant.

First National Bank of Chicago and Harris Trust each manage a portion of their funds in index

funds for GM.

As of Sept. 30, 1979, $305 million was invested in GICs.

Charles J. Scanlon, vp and pension fund investment coordinator, and R. Charles Tschampion, director, pension trust analysis, are involved in overseeing the investment management and administration of the fund.

General Telephone & Electronics Corp.

	($ millions)
Total assets	2,052
Employer contributions	220*
Benefit payments	72*

*estimate

STAMFORD, CT.—General Telephone & Electronics Corp. made significant changes during 1979, notably in the areas of international investing and inhouse asset management.

During 1979, GT&E added five international managers to its previous roster of 22 domestic and international managers. In January 1979, the company named State Street Bank & Trust, Boston, and in June, it added G.T. Capital Management Inc., San Francisco; Warburg Investment Management International Ltd., London; and Fidelity International Investment Management Inc., Boston.

Effective in early December, GT&E hired Rowe Price-Fleming International Inc., Baltimore, as an international manager. Effective February 1, 1980, GT&E will have three additional international managers: Ivory & Sime International, Chatham, N.J.; Morgan Grenfell Investment Services Ltd., and Schroder Naess International, both of New York.

Harold McGraw, assistant vp, investment research, explained that GT&E is "shooting to push international to 7% to 10% of total assets by the end of 1980. At the end of 1979, we had about 4% of total assets invested internationally through the segregated accounts of State Street, G.T. Capital, Warburg, Fidelity, Rowe Price-Fleming, Morgan Guaranty and Putnam Advisory Co."

Mr. McGraw added that the impetus for adding the international managers included broader diversification and "the potential for superior returns."

Another important move for GT&E in 1979 was the commitment it made to inhouse management. GT&E Investment Management Corp. was established on October 1 to consolidate pension fund activities, and was operating with inhouse money on December 3. GT&E brought $14 million of debt assets inhouse, and by the end of 1980, it expects to have $250 million in debt assets inhouse.

Mr. McGraw explained that "with the availability of a superior bond manager, we could achieve positive performance, and at the same time achieve some cost savings through fees versus salaries."

In the fall of 1979, GT&E named Andrew Heiskell as vp, fixed income, to manage short-term investments inhouse. Mr. Heiskell was formerly vp in charge of fixed income for FMR Investment Management Services, Boston.

In addition to its new international managers, GT&E named three specialty equity managers in the past year: INCO Capital Management Inc., and Neville, Rodie & Shaw, both in New York, and Wilkins & Nanovic Associates, Greenwich, Ct. GT&E terminated the National Bank of Detroit in spring, 1979.

Other specialty equity managers for GT&E are: Batterymarch Financial Management Corp., Boston; First Manhattan Co., General American Investors Co. Inc., MacKay-Shields Financial Corp., Century Capital Associates and Fortsmann-Leff Associates, all of New York, and Wentworth, Hauser and Violich, San Francisco.

Conventional equity managers are: Citibank and Lord, Abbett & Co., both of New York; Fayez Sarofim & Co., Houston; Putnam Advisory Co., Boston, and T. Rowe Price Associates Inc., Baltimore.

Debt managers are: Brown Brothers Harriman & Co. and Fischer, Francis Trees & Watts, Inc., both of New York; Harris Trust and Savings Bank, Chicago; Massachusetts Financial Corp. and Loomis, Sayles & Co. Inc. both of Boston; and Pacific Investment Management Co., Newport Beach, Ca.

Analytic Investment Management Corp., Newport Beach, and Putnam write options for GT&E.

Bankers Trust, New York, manages a market inventory fund, and a small cash position, and Wells Fargo, San Francisco manages an index fund. Morgan Guaranty Trust Co. manages conventional and specialty equities as well as debt.

None of the pension assets is in GICs, and while the company does not use financial futures yet, Mr. McGraw said that GT&E expects to use them in 1980.

The total asset figure of $2.052 billion represents assets from the GT&E Service Corp. Pension Trust and the Retirement System for Hawaiian Telephone Cos. The contribution figure by GT&E and benefit payments were not available.

GT&E fund ranked 39th as of September 30, 1979 among the 100 largest fund sponsors. Among corporate fund sponsors in the Top 100, GT&E ranked 18th.

Bankers Trust continues as master trustee. Rogers, Casey & Barksdale, Stamford, Ct. is the consulting firm.

As of Sept. 30, 1979, asset mix was 67% stocks, 12% bonds, and 21% cash/equivalents.

James M. Dunn Jr., is president, GT&E Investment Management Corp.; William Marshall is vp, operations; Andrew Heiskell is vp, fixed income; Harold McGraw is assistant vp, investment research, and Mary Wilkinson is investment services manager.

Georgia State Retirement Systems

	($ million)
Total assets	2,037
Employer contributions	161
Benefit payments	112

ATLANTA—Total pension assets of the Georgia State Retirement Systems were $2.037 billion as of Sept. 30, up from $1.9 billion one year ago.

The Teachers Retirement Sys-

Top 100 profiles

tem of Georgia plan had total assets of $1.425 billion and the Employes Retirement System of Georgia plan, $612 million.

With over $2 billion in assets, the Georgia fund ranks 40th among the Top 100 and 20th among public funds.

All of the assets are managed internally. Two banks, however, act as outside advisers to the funds, primarily for equity investments. They are: Citizens & Southern National Bank of Georgia, Atlanta, and First National Bank of Atlanta.

None of the assets is invested in guaranteed income contracts or indexed. The funds do not use option writing or financial futures.

The funds do not invest internationally, but they do invest in Canadian government bonds payable in U.S. dollars and held $67 million at the end of September.

The asset mix for total funds was 31% equities, 62% fixed income, 1% real estate, 4% cash/equivalents, and 2% other, which included mortgages. The real estate investments are direct investments.

Georgia has a securities lending program which has been in operation for several years, according to Graham R. Lynch, director-division of investment services. Salomon Brothers handles the program for the funds.

In addition to Mr. Lynch, the key personnel at the Georgia State funds are C.W. Cary, assistant director; Nancie Boedy, bond portfolio manager; and Bob Heflin, mortgage and real estate supervisor.

Goodyear Tire & Rubber Co.

	($ millions)
Total assets	1,057*
Employer contributions	87
Benefit payments	66

*estimates

AKRON—Pension assets at Goodyear Tire & Rubber Co. increased 22%, during the 12 months ended September 30, 1979, according to *P&I* estimates.

P&I estimated assets at Goodyear totaled $1.057 billion, and the company's fund ranked 87th as of that date among the 100 largest fund sponsors. Among corporate funds in the *P&I* Top 100, Goodyear ranked 47th.

According to the 1980 Money Market Directory, money managers for Goodyear were: Equitable Life Assurance, N.Y.; National Bank of Detroit; The National City Bank of Cleveland; and Prudential Insurance Co., Newark.

Bennett H. Shaver, assistant treasurer, is responsible for asset administration.

Gulf Oil Corp.

	($ millions)
Total assets	1,142
Employer contributions	146
Benefit payments	115

PITTSBURGH—Gulf Oil Corp.'s employe benefit assets stood at $1.142 billion as of September 30, an increase of $182 million over the same period in 1978.

Among the Top 100 plan sponsors, Gulf Oil ranked 76th. Among the largest corporate sponsors, Gulf Oil ranked 39th.

The four largest employe benefit plans are the Gulf pension plan with $988 million in assets, the Gulf savings and stock bonus plan with $102 million, the General Atomic pension plan with $22 million and the Kewanee retirement plan with $9 million (all figures as of September 30).

Gulf retains nine investment managers which remained unchanged during 1979. The equity managers are: Lionel D. Edie & Co., New York; Federated Investment Counseling Inc., Pittsburgh; Jennison Associates Capital Corp., New York; Mellon Bank, Pittsburgh; and Wells Fargo Investment Advisors, San Francisco.

The fixed-income managers are Brown Brothers Harriman & Co., New York; Massachusetts Financial Services Co., Boston; Mellon Bank, and State Street Research & Management, Boston.

Wells Fargo maintains Gulf's $36 million index fund, which was started in 1978 with $30 million.

The asset mix for the Gulf plans is 36% equities, 36% fixed income, 12% guaranteed income contracts and 16% cash equivalents.

Gulf manages a liquid reserve account with $6.3 million in assets internally. The guaranteed income contracts are with the following companies: Aetna Life Insurance Co., Hartford; Metropolitan Life Insurance Co., New York; and the Travelers Corp., Hartford.

None of the assets is invested internationally nor has Gulf used options or financial futures.

Mellon Bank is master trustee for the plans.

R.A. McKean, III, is manager-pension fund investments. He was promoted from supervisor-pension projects in August. At the same time, J. Reid Williams was promoted from pension fund investment administrator to the manager-insurance for Gulf and its subsidiary companies.

Hawaii Employes Retirement System

	($ millions)
Total assets	1,525*
Employer contributions	74
Benefit payments	65

*estimate

HONOLULU—Pension assets for Hawaii's sole municipal pension system increased by $537 million in 1979 to rank the system 58th in the Top 100 and 25th among the municipal funds.

The fund ended the year with 39% of its assets in cash equivalents and 30% in real estate. Bonds comprised 15% and stocks 16% of the remaining portfolio.

The Hawaii consolidated plan covers all state and local employes including police and fire personnel.

The system listed Bernstein Macaulay, New York; Safeco Asset Management, Seattle; Delaware Investment Advisers, Philadelphia; Fayez Sarofim, Houston; Bankers Trust Co., New York; Scudder Stevens & Clark Inc. and Pacific Investment Management Co., Newport Beach, Cal., as money managers.

The fund manages $357 million inhouse; an increase of $45 million over last year.

It does not index, use GICs, foreign markets, options or financial futures. It also does not have a master trustee or consultant.

Key officials in the administration and investment management of the fund are Stanley Siu, secretary and Benjamin Choo, assistant secretary.

Hughes Aircraft

	($ millions)
Total assets	1,100
Employer contributions	80
Benefit payments	20

CULVER CITY, CA.—Gary B. Helms joined Hughes Aircraft in 1979 as director of investment management. His extensive Wall Street career included being director of research and chief investment officer at Loeb Rhoades Shearson Hayden Stone. He replaced John Crowl who left to start an investment counseling firm.

Hughes had $1.1 billion in employe benefit assets as of Sept. 30,

Continued on page 27

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Continued from page 24
1979. The company ranked 83rd among the Top 100 sponsors profiled by *Pensions & Investments* and 43rd among corporate sponsors.

The two largest employe benefit plans are the Hughes Aircraft Company Retirement Plan with $830 million in assets and Hughes Aircraft Company Savings Plan with $230 million in assets.

Employer contributions totaled $80 million during 1979 and benefits paid to retirees were $20 million.

Hughes retains 13 investment management firms. Capital Guardian Trust Co., Los Angeles was added during 1979. The other managers are: Alliance Capital Management Corp., BEA Associates Inc., Eberstadt Asset Management Inc., Jennison Associates Capital Corp., MacKay-Shields Financial Corp., and New Court Capital Management Inc., Reich & Tang Inc. all New York; The Putnam Advisory Co. Inc., Boston; Rosenberg Capital Management, San Francisco; T. Rowe Price Associates Inc., Baltimore; Fayez Sarofim & Co., Houston; and TCW Asset Management Co., Los Angeles.

In addition to outside managers, Hughes manages $190 million internally. This was increased by $50 million in 1979 and consists of $80 million in equity investments and $110 million in short term fixed-income investments.

None of the assets is indexed or in guaranteed income contracts. Hughes does not use options or financial futures and does not invest internationally.

The asset mix for total funds as of September 30 was 66% equities, 18% fixed income, 12% cash equivalents, 3% real estate and 1% other. The real estate is invested in three commingled funds plus one direct investment. The three commingled funds are through Aetna Life Insurance Co., Hartford, Coldwell Banker, Los Angeles, and Rosenberg Real Estate Funds, San Francisco.

Hughes has also invested in three venture capital partnerships and one oil and gas partnership. The venture capital partnerships are Intervest Partners, San Francisco, New Court Partners, New York, and Sprout which is part of Donaldson, Lufkin & Jenrette, New York.

Bank of America is master trustee for the Hughes plans.

In addition to Mr. Helms, the other key personnel involved with overseeing the investment and administration of the pension assets are : T.V. Keene, vp-finance, and D.M. Hostetler, associate director, investment management.

Illinois Bell Telephone Co.

	($ millions)
Total assets	1,103
Employer contributions	142
Benefit payments	62

CHICAGO—The heavily-indexed assets of the Illinois Bell Telephone Co. employe benefit plan increased $177 million to $1.1 billion as of Sept. 30, 1979.

With total assets of $1.1 billion, the company's fund ranks 81st among the 100 largest funds and 42nd among corporate funds.

The assets are all in one plan, and the fund has a team of nine managers handling the fund. The investment management firms currently guiding the fund assets are Harris Trust and Savings Bank, Chicago; T. Rowe Price Associates, Baltimore; Jennison Associates, Thorndike, Doran Paine & Lewis, Morgan Guaranty Trust of New York; Wells Fargo Investment Advisors, San Francisco; First National Bank of Chicago; Rosenberg Capital Management, San Francisco; and Lincoln Capital Management, Chicago.

The fund added no new managers in 1979.

According to fund officials, $28.7 million of the fund is managed internally, which is about the same amount that was handled inhouse last year.

None of the assets is in GICs, nor is the fund invested in foreign markets.

The fund has $481 million in an indexed fund, which is almost 50% of the total assets. The fund does not write options against its equity holdings, nor does it use the financial futures markets.

The approximate asset mix of the fund is 62.3% in stocks, 22.8% in bonds, 12.7% in cash and 2.2% in real estate.

Smith Barney, Harris Upham serves as an investment management consultant to the fund.

Key personnel in the administration of fund assets, are H.A. Latimer, vice president; R.L. Pearson, treasurer; G.P. Williams, assistant treasurer; and R.R. Roessler, district manager.

Illinois Municipal Retirement Fund

	($ millions)
Total assets	1,007
Employer contributions	129.3
Benefit payments	48

CHICAGO—The Illinois Municipal Retirement Fund has hired Oppenheimer Capital Corp., N.Y., as investment adviser for half of the fund's equity portfolio, effective January 1.

Alliance Capital Management Corp. was previously adviser to the equity portion of the $1.007 billion fund, and will remain an adviser to the other half of the equity portfolio as well as remaining adviser to

Top 25 public employe funds

Rank	Fund/Sponsor	Assets ($ millions)
1.	California Public Employes	17,958
2.	N.Y. State Employes	14,366
3.	N.Y.C. Employes/Teachers	10,461
4.	N.Y. State Teachers	6,463
5.	N.J. Div. of Investment	5,171
6.	Ohio State Teachers	4,611
6.	Texas State Teachers	4,611
8.	Pennsylvania School Employes	4,395
9.	Ohio Public Employes	4,300
10.	Wisconsin Investment Board	4,229
11.	Michigan State Employes	4,146
12.	Minnesota Investment Board	4,034
13.	North Carolina Employes	3,940
14.	Florida Retirement System	3,090
15.	Washington Public Employes	2,750
16.	Los Angeles County Employes	2,539
17.	Pennsylvania State Employes	2,340
18.	Illinois Teachers	2,179
19.	Maryland Public Employes	2,100
20.	Georgia State Retirement	2,037
21.	Alabama Public Employes	1,828
22.	Colorado Public Employes	1,815
23.	Arizona Public Employes	1,788
24.	South Carolina Employes	1,632
25.	Hawaii Public Employes	1,525
	Total	**114,207**

Pensions & Investments, 1/21/80

Top 25 corporate fund/sponsor

Rank	Fund/Sponsor	Assets ($ millions)
1.	General Motors Corp.	12,973
2.	General Electric Co.	6,023
3.	Ford Motor Co.	4,900
4.	Western Electric Co.	4,828
5.	U.S. Steel & Carnegie	4,700
6.	IBM Corp.	4,476
7.	E.I. DuPont De Nemours	4,205
8.	Exxon Corp.	3,624
9.	Sears, Roebuck & Co.	2,676
10.	Pacific Telephone	2,541
11.	Rockwell International	2,494
12.	Eastman Kodak Co.	2,442
13.	Bell System Savings Plan	2,350
14.	New York Telephone	2,300
15.	Boeing Co.	2,169
16.	Shell Oil Co.	2,162
17.	Mobil Oil Co.	2,100
18.	General Telephone & Electronics	2,052
19.	Chrysler Corp.	2,014
20.	United Technologies	1,950
21.	Bethlehem Steel Corp.	1,926
22.	Standard Oil Co. (In.)	1,907
23.	Southwestern Bell Telephone	1,894
24.	McDonnell Douglas Corp.	1,829
25.	Westinghouse Electric	1,800
	Total	**82,335**

Pensions & Investments, 1/21/80

Top 100 profiles

the fund's $853 million bond portfolio.

Pension assets at the Illinois Municipal Retirement Fund grew by a miniscule 1% during the 12 months ending September 30, 1979.

With total assets of $1.007 billion, the municipal fund ranked 90th as of that date among the 100 largest fund sponsors. Among municipal funds in the *P&I* Top 100, the fund ranked 37th.

The fund has two investment management firms serving in advisory positions, Alliance Capital Management Corp. and Oppenheimer Capital Corp. both of New York. But the full $1.007 billion is managed internally with advice from those two firms.

As of September 30, 1979, the asset mix was 22% stocks, 68% bonds and 10% cash equivalents.

The fund has $55 million (market value) invested in foreign markets, but has no guaranteed investment contracts.

The fund does not use options or financial futures, and does not have a master trustee.

The key executives responsible for the administration of asset management are Ralph Kausch, executive director; Hiroshige Mori, investment manager; Walter Koziol, assistant investment manager, and Patti Iverson, bond analyst.

Illinois State Board of Investment

	($ millions)
Total assets	862
Employer contributions	103*
Benefit payments	51*

*estimate

CHICAGO—The Illinois State Board of Investment is gearing up to start an option writing program after the state general assembly passed the enabling legislation this year.

Pension assets under the investment board increased 15% during the 12 months ended Sept. 30, 1979.

With total assets of $862 million, the board ranked 97th among the 100 largest fund sponsors. Among public funds in the Top 100, the investment board ranked 40th.

Most of the assets belong to the State Employes Retirement System of Illinois, with $802 million. The remaining assets belong to the Judges Retirement System of Illinois, with $49 million in assets, and the General Assembly Retirement System, with $11 million in assets.

This year marked the second year that the assets were entirely under the management of the investment board.

As of September, the asset mix was 16.6% stocks, 63% bonds, 19.2% cash/equivalents and 1.1% "other".

None of the assets is indexed or in guaranteed investment contracts. No assets are invested overseas and financial futures are not used.

There is no master trustee.

The key executives responsible for the administration of asset management are Robert J. Harmon, director; Larry G. Darlington, fixed-income manager; and Donald L. Wampach, equity manager.

Illinois Teachers Retirement System

	($ millions)
Total assets	2,179
Employer contributions	213
Benefit payments	206

SPRINGFIELD—Pension assets of the Illinois Teachers Retirement System increased by 22% during the 12 months ended September 30, 1979.

With total assets of $2,179 million, the fund ranked 34th as of that date among the 100 largest fund sponsors. Among public funds in the Top 100, the Illinois Teachers' ranked 18th.

Contributions to the fund for the year totaled $212.9 million in appropriations. Investment earnings on the fund totaled $140 million.

Assets continued to be managed by the system's sole investment manager, Springfield Marine Bank.

As of September 30, the asset mix was 28% stocks, 60% bonds, and 12% cash/equivalents.

The system has about $19 million invested in Canadian bonds, but has no other foreign holdings. None of the assets are managed internally, and none are indexed. The fund does not invest in guaranteed investment contracts and does not write options or use financial futures.

The key executive responsible for the administration of asset management is Roy A. Baker, director.

International Business Machines

	($ millions)
Total assets	4,476*
Employer contributions	520*
Benefit payments	69*

*estimate

ARMONK, N.Y.—*Pensions & Investments* estimates total employe benefit assets of International Business Machines at $4.476 billion as of Sept. 30, 1979, up from $3.640 billion at Dec. 31, 1978.

Employer contributions are estimated at $520 million for all of 1979, up from $460 million in 1978, and benefit payments are estimated at $69 million, up from $62 million in 1978.

As of Sept. 30, 1979 the company's funds ranked 14th among the largest fund sponsors. Among corporate funds in the *P&I* Top 100, IBM ranked 6th.

More than 90% of the total assets is in the IBM Retirement Plan Trust Fund, and the remainder is in the IBM Benefit Plan Trust Fund for Retired Employes.

IBM, with 17 investment managers, selected Chase Manhattan Bank as its master trust in the summer of 1979.

The 12 equity managers for IBM are: David L. Babson & Co., State Street Research & Management Co., and Wellington Management Co., all in Boston; Bankers Trust Co., Citibank, Cole, Yeager & Wood Inc., Lord, Abbett & Co., Morgan Guaranty Trust Co., all in New York; Delaware Investment Advisers, Philadelphia; Capital Guardian Trust Co., Los Angeles; T. Rowe Price Associates, Inc., Baltimore; and Wells Fargo, San Francisco, which IBM added in 1979.

Fixed income managers for IBM are: American Fletcher National Bank, Indianapolis; Brown Brothers Harriman & Co., United States Trust Co., Fischer, Francis, Trees & Watts Inc., all of New York; and Harris Trust & Savings Bank, Chicago.

In the summer of 1979, IBM hired Lee Garcia, former vp and director of research at First National Bank of Minneapolis, to head up a developmental equity management program. Mr. Garcia's appointment, effective in the fall of last year, was a commitment on the part of IBM to inhouse management, observers said, However, IBM declined to disclose the amount of assets that were being managed internally.

None of IBM's assets are indexed, nor are they invested in GICs or financial futures. A "negligible" amount of assets is invested in foreign markets, and no options are written.

As of Dec. 31, 1978, asset mix of the IBM Retirement Plan Trust Fund was 53% invested in stocks;

21% in bonds, 25% cash/equivalents.

Frank Russell Co. Inc., Tacoma, Wa. acts as the company's investment management consultant.

Peter Weil, director U.S. Retirement funds, IBM, will retire as of Jan. 31, 1980. A successor had not yet been named early this month.

International Harvester Company

	($ millions)
Total assets	1,000
Employer contributions	165*
Benefit payments	120

*estimate

CHICAGO—Pension assets of International Harvester Co. were up $125 million to $1 billion in the 12 months ended Sept. 30, 1979.

With total assets of $1 billion, the company's fund ranked 91st as of that date among the 100 largest fund sponsors. Among the corporate funds in the Top 100, the fund ranked 50th.

The fund's assets are held in four major plans including a noncontributory retirement plan with $411 million, a retirement plan for salaried employes with $571 million, a contributory annuity with $3 million and a solar noncontributory retirement plan with $15 million.

Fund assets are managed by 17 investment advisers including: Alliance Capital; Bankers Trust; Connecticut General Life Insurance; Equitable Life Assurance; FMR Investment Advisers; John Hancock; Kaliber, Lord Abbett & Co., Morgan Guaranty; Northern Trust, Prudential Life Insurance; Putman Advisory; State Street Investment Advisors; TCW Asset Management; Wells Fargo and Wentworth, Hauser & Violich.

None of the assets is managed internally.

According to fund officials, $43 million is in the Wells Fargo Yield Tilt fund—a newcomer on the industry scene this year.

The fund has $100 million plus invested in GICs and an "insignificant" amount invested in foreign markets. The fund has about 5% committed to an option program but does not use the financial futures markets.

The approximate asset mix of the fund is 47% stocks, 34% fixed income, 9% cash/equivalents and 10% real estate.

Frank Russell Co. of Seattle serves as an investment management consultant to the fund.

Key personnel involved in fund administration for the company include: Keith R. Potter, chairman of the board, and Ward Cramer, secretary.

Iowa Public Employes Retirement System

	($ millions)
Total assets	1,135
Employer contributions	77
Benefit payments	53

DES MOINES—The Iowa Public Employes Retirement System increased the assets managed internally 20% during 1979, bringing the total under internal management to $150 million.

Total assets of the Iowa employes' system increased 14% during the 12 months ended Sept. 30, 1979.

With total assets of $1.135 billion, the state's fund ranked 77th as of that date among the 100 largest fund sponsors. Among public funds in the Top 100, the system ranked 34th.

Money managers for the system remained the same during 1979. Those managers are: Alliance Capital Management Corp., New York; The Boston Co., Boston and Capital Guardian Trust, Los Angeles.

As of September 30, the asset mix was 9% stocks, 78% bonds and 13% cash/equivalents.

None of the assets are indexed or invested in guaranteed investment contracts. The fund does not invest overseas but does have a portion of its assets in Canadian bonds.

Financial futures are not utilized, and options are not written against equity holdings. The system does not have a master trustee.

Key executives responsible for the administration of asset management are Edward Longnecker, director; Doyle Sales, assistant director; the advisory board and the investment counselors.

Lockheed Corp

	($ millions)
Total assets	1,787
Employer contributions	145
Benefit payments	55

BURBANK, CALIF.—Lockheed Corp., whose pension fund assets totaled $1.787 billion as of June 30, is undergoing major changes in the investment management of the 14 funds represented in the total asset figure.

The fund, ranked 53rd among the 100 largest fund sponsors and 26th among the *P&I* Top 100 corporate funds listed 19 different money managers as of June 30, but will announce changes in investment management after the first of the year, according to G.C. Weintz, investment counsel.

Lockheed's pension assets are divided among 14 plans, the largest of which are Lockheed Retirement Plan for Certain Salaried Employes with assets of $893 million; Lockheed Retirement Plan for Certain Hourly Employes with assets of $339 million; Lockheed Salaried Employes Savings Plan with assets of $353 million and Lockheed Hourly Employes Savings Plan with assets of $135 million.

Investment managers Lockheed used as of June 30 were: BAIMCO, San Francisco; Bankers Trust Co.; CIMCO and Citibank, New York; Continental Illinois Bank, Chicago; Delaware Investment Advisors, Philadelphia; Eagle Management & Trust Co., Houston; Forstmann-Leff Associates and Manufacturers Hanover Trust, New York; Mellon Bank, Pittsburgh; Morgan Guaranty, New York; Pacific National Bank of Washington, and Seattle Royal Trust Co. (Canada).

Also included are Fayez Sarofim, Houston; Smith Barney, Harris Upham & Co., and Stein Roe & Farnham, New York; TCW Asset Management Co. and United California Bank/Western Asset Management Co., Los Angeles and Wertheim Asset Management Services Inc., New York.

None of the assets is managed in-

Top 100 profiles

ternally nor are assets indexed. Lockheed has investments in foreign markets and guaranteed return contracts with Mutual of New York but declined to state the total invested. The funds use neither options nor financial futures.

Lockheed also declined to disclose the approximate asset mix of pension fund investments.

Bankers Trust Co. is master trustee for Lockheed savings plans; the retirement plans have no master trustee nor does the company use an investment management consultant.

Key personnel overseeing investment management and administration of the funds are: G.L. Weintz, investment counsel; A.J. Ratto, director, retirement & savings plans; R.R. McKirahan, vp and treasurer.

Los Angeles County Employes Retirement Assn.

	($ millions)
Total assets	2,539
Employer contributions	163
Benefit payments	130

LOS ANGELES—With total pension fund assets of $2.5 billion the Los Angeles County Retirement Assn. ranks 28th among the top 100 funds, and 16th among public funds.

The bulk of the fund's $625 million equity program is with Capital Guardian Trust Co. here which manages a total $575 million. Massachusetts Financial Services Inc., Boston, was added as of Jan. 1, 1979. Mass Financial now has a total $50 million under management.

Capital Guardian also manages $100 million in fixed-income securities with the balance of $350 million managed by Brown Brothers Harriman & Co., New York.

Of the fund's total bond portfolio, 77% is triple-A rated, 11% double-rated and 11% single-A, according to H. B. Alvord, Los Angeles County treasurer.

"Everything else is managed in-house," Mr. Alvord said, including direct purchase of $300 million in real estate.

The fund has about $100 million invested in Canada with $75 million in government entities and $25 million in the private sector (U.S. dollar denominated). Other than $1 million invested in bonds in the state of Israel, the fund has no overseas investments.

The approximate asset mix of the fund includes 23.4% in stocks, 42% in bonds, 10% in real estate and 5% in cash equivalents.

The fund does not use options or financial futures, nor does it have a master trustee or an investment management consultant.

No part of the fund is indexed nor are guaranteed return contracts used.

Key executives responsible for administration of the fund are: H.B. Alvord, treasurer, Larry Monteilh, retirement systems manager, Betty Mulkern, supervising portfolio analyst and Jerold Hampton, benefits division chief.

Louisiana Teachers Retirement System

	($ millions)
Total assets	1,312
Employer contributions	76
Benefit payments	140

BATON ROUGE—The Louisiana Teachers Retirement System terminated Alliance Capital Management Corp. as an adviser for the system's small equity portfolio during 1979.

The equity assets were placed with the system's two other advisers: Scudder, Stevens & Clark, New York, and Hibernia National Bank, New Orleans. Scudder is adviser for 80% of the portfolio, and Hibernia 20%. Assets are managed internally.

Pensions & Investments projects the system's assets as of Sept. 30, 1979 at $1.312 billion, ranking it 70th in the 100 largest fund sponsors, and 33rd among state and local funds. The system's assets grew 12.6% since Sept. 30, 1978.

As of June 30, 1979, assets were invested 86% in bonds, 12% in cash and equivalents and 2% in equities. During the past year, the system lowered its bond commitment from 92% and raised its cash position from 6%.

City National Bank of Baton Rouge is the custodian.

Carleton C. Page is secretary/treasurer of the system and Jennifer Netterville is the investment portfolio specialist.

The LTV Corporation

	($ millions)
Total assets	1,011
Employer contributions	121*
Benefit payments	40*

*estimates

DALLAS—Pension assets of The LTV Corporation increased over one-third to $1.01 billion during the 12 months ending Sept. 30, 1979. The increase, however, was due to the consumation of the LTV-Lykes Corp. merger late in 1978.

With total assets of $1.01 billion, the fund ranked 89th as of that date among the 100 largest fund sponsors. Among corporate funds in the Top 100, LTV ranked 49th.

The fund assets are managed by 13 investment management firms including: Bankers Trust; BEA Associates; Continental Bank Illinois; Fischer, Francis, Trees & Watts; Endowment Management & Research; Lionel D. Edie; First National Dallas; IDS; Mellon Bank; National City Bank in Cleveland; T. Rowe Price; Fayez Sarofim and Scudder, Stevens & Clark.

None of the assets is managed internally. Fund officials declined to note if the fund used indexing, GICs, foreign markets options or financial futures.

Fund officials also did not include the asset mix, although last year (1978) the fund was primarily invested in stocks and bonds, with 87% of the assets in those areas.

Mellon Bank of Pittsburgh acts as the fund's master trustee, and fund officials listed no investment management consultant.

Key personnel involved in fund administration include George Simon, director of the employe benefits and trust administration, and an investment committee of three persons.

Maryland State Retirement Systems

	($ millions)
Total assets	2,100
Employer contributions	250
Benefit payments	170

BALTIMORE—The state of Maryland this year enacted a law setting up new pension systems for new state employes which will halve the state's pension costs by the year 2020.

The new systems will have a 3% cap on cost-of-living pension increases, thereby ending Maryland's distinction as the only state tying these increases directly and fully to the rate of inflation.

Under the new systems, new benefits will be cut in some places by 20%.

Retirement assets for the Maryland State Retirement Systems were $2.1 billion at the end of September 1979; up from $2 billion the previous year. The systems ranked 37th among the Top 100 funds and

19th among public funds.

All assets are internally managed. The asset mix has not changed the past year, with about 36% in equities and 64% in bonds. According to Howard France, investment administrator, fixed-income assets are almost totally in longer-term issues, as the system has positioned itself to what it sees as a peak in interest rates over the next several months.

Mr. France said the system is also in the process of utilizing the Depository Trust Co. through its custodian, First National Bank of Maryland.

In addition to Mr. France, Joel Oppenheim is senior portfolio manager for equities, Margaret Potter is senior portfolio manager for fixed-income and Arthur Lynch is senior investment strategist.

Massachusetts State Employes and Teachers Retirement System

	($ millions)
Total assets	1,460
Employer contributions	13
Benefit payments	na

BOSTON—Assets for the Massachusetts State Employes and Teachers Retirement System stood at $1.46 billion as of Sept. 30, 1979. The state fund ranked 61st among the Top 100 funds profiled by *Pensions & Investments*. Among the largest public funds, Massachusetts ranked 27th.

The teachers' retirement fund had total assets of $789 million, the state employes' fund had $671 million, both as of September 30.

The Commonwealth of Massachusetts contributed about $13 million to the funds during 1979. According to Donald P. Frary, deputy state treasurer, the funds have adopted a 40-year funding schedule.

All of the assets are managed internally. The asset mix was 5% equities, 85% fixed income and 10% cash equivalents as of September 30. The asset mix remained unchanged from the prior year.

The two state funds have none of the assets indexed, invested internationally or in guaranteed income contracts. The funds do not write options or use financial futures.

The funds do not use outside consultants.

In addition to Mr. Frary, deputy state treasurer, the other key person is Philip D. Kett, assistant director, pension investment division.

McDonnell Douglas Corp.

	($ millions)
Total assets	1,829*
Employer contributions	178**
Benefit payments	68**

*as of Aug. 31, 1979
**fund estimate

ST. LOUIS—The McDonnell Douglas employe benefit fund assets increased $157 million (9%) the 12 months ending Aug. 31, 1979. Total fund assets are $1.83 billion, ranking the company 48th among the 100 largest fund sponsors. Among corporate funds in the Top 100 the company ranked 24th.

The assets are held in four plans including: Salaried Employe Retirement Income Plan of MDC with $826 million, the Hourly West Plan with $325 million, the Hourly East Plan with $256 million and the Salaried Employe Savings Plan with $371 million.

Fund assets are managed by five investment management firms including: Bankers Trust, Aetna Life, Chemical Bank, St. Louis Union Trust and Lionel D. Edie. The fund added no managers in 1979.

None of the fund assets is managed internally and fund officials preferred not to disclose how much of the assets is indexed.

The fund has less than 1% of its assets in foreign markets and does not use options, financial futures or GICs.

The approximate asset mix of the fund as of Aug. 31, 1979 was 59% in stocks, 36% in bonds and 5% in cash/equivalents.

Bankers Trust Co. serves as the master trustee for the company's savings funds. The pension funds have no master trustee although Morgan Guaranty Trust Co. of New York does serve as custodian for the three major pension plans.

Key personnel involved in administering the fund are David C. Anderson, director retirement funds management; and Donald J. Homan, director payroll and benefit accounting.

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Michigan Bell Telephone Co.

	($ millions)
Total assets	844
Employer contributions	95
Benefit payments	35

DETROIT—Pension assets of the Michigan Bell Telephone Co. increased $179 million to $844 million during the 12 months ending Sept. 30, 1979, ranking the fund 99th as of that date among the 100 largest fund sponsors.

Among all of the corporate funds in the Top 100, Michigan Bell ranked 55th.

Investment management firms currently handling fund assets include: Brown Brothers Harriman, Ameritrust, Delaware Investment, Fischer Francis, Trees and Watts, Lord Abbett, National Bank of Detroit and Stein, Roe, Farnham.

None of the assets is managed internally. None of the assets is indexed, nor is any invested in GICs or foreign markets.

The fund does not use options nor does it use financial futures.

As of Sept. 30, 1979, the asset mix was 61% in stocks, 25% in bonds, 12% in cash/equivalents and 2% in real estate.

Smith Barney, Harris Upham & Co. serves as an investment management consultant.

Key personnel involved in fund administration are Raymond A. Rathka, treasurer; and John C. Shoemaker, assistant treasurer.

Michigan Employes Retirement Systems

	($ millions)
Total assets	4,146
Employer contributions	559
Benefit payments	269

LANSING—The Michigan State Employes Retirement Systems dropped Detroit Bank and Trust and Manufacturers National Bank of Detroit as money managers this year, and brought that money inhouse. The two banks were managing a portion of the fund's equities. A spokesman for the systems said the inhouse equity staff had been expanding and "outperforming" those two managers.

Pension assets at the state system increased by 14% during the 12 months ended Sept. 30, 1979.

With total assets of $4.146 billion, the public fund ranked 18th as of that date among the 100 largest fund sponsors. Among public funds, the Michigan system ranked 11th.

The largest portion of the assets belongs to the Public School Employes Chapter I Retirement System, with $2.774 billion in assets, followed by the State Employes Retirement System with $907 million, the Public School Employes Chapter II Retirement System with $367 million, and the State Police Pension, Accident & Disability Funds, with $68 million.

Most of the assets—$3.859 billion—are managed internally, an increase of $269 million over last year's internally managed assets.

In addition, the systems have National Bank of Detroit and Prudential Insurance Co., Newark, acting as investment managers for a portion of the equity fund.

As of September 30, the asset mix was 17.4% equities, 51% bonds, 15.1% cash/equivalents, .2% real estate and 16.3% mortgages.

The systems do not have any assets indexed or in guaranteed investment contracts. None of the assets is invested overseas and no options are written against the equity holdings. Financial futures are not used.

The state treasurer is trustee for the funds. No investment management consultant is used.

The key executives responsible for the administration of asset management are William A. Amerman, director of investments; Barry Stevens, administrator, stock division; Milan J. Maat, administrator, short term investments; and Robert C. Peck Jr., administrator, mortgage division.

Minnesota State Board of Investment

	($ millions)
Total assets	4,034
Employer contributions	200
Benefit payments	105

ST. PAUL—The Minnesota State Board of Investment is no longer investing in companies that sell infant formula to underdeveloped countries, although the investment board staff itself recommended against such a move. Companies that sell such products include American Home Products, Bristol Myers and Abbott Laboratories.

The Board is also continuing its policy of voting proxies, and earlier this year voted its shares against the management of Northwest Airlines in a labor dispute.

Pension assets of the Minnesota State Board of Investment in-

creased by 21% during the 12 months ended September 30, 1979.

With total assets of $4,034 million, the fund ranked 20th as of that date among the 100 largest fund sponsors.

Among public funds in the Top 100, the Minnesota fund ranked 12th.

The fund's assets are all managed internally. The assets belong to four state funds, including the Minnesota Adjustable Fixed Benefit Fund, the Teacher's Retirement Fund, the Public Employes' Retirement Fund and the State Employes' Retirement Fund.

None of the assets is indexed or invested in guaranteed investment contracts.

The fund has $158 million in Canadian bonds, but does not write options or use financial futures markets.

The state fund does not use a master trustee.

As of September 30, 1979, the asset mix was 30% stocks, 36% bonds and 34% cash equivalents.

The key executives responsible for the administration of asset management is Jonathan White, executive director who replaced interim director Francis Boddy last April. Other key executives are: Art Kaese, assistant director; Roger Derksen, manager, equity securities, and Grant Feldman, manager, fixed income securities.

Public School Retirement System of Missouri

	($ millions)
Total assets	1,103
Employer contributions	148*
Benefit payments	89*

*fund estimates for fiscal year ending June 30, 1980

JEFFERSON CITY, MO.—The Public School Retirement System of Missouri registered a slight decrease in assets of $24 million over the past 12 months ending June 30, 1979.

With total assets of $1.1 billion, the fund ranked 81st among the 100 largest fund sponsors. Among public funds in the Top 100 the Public School Retirement System of Missouri ranked 36th.

Fund officials had no reason for the decrease of fund assets to $1.1 billion as of June 30.

The single investment management firm for the fund assets is the Boatmen's National Bank of St. Louis.

None of the fund assets is managed internally, none is indexed, none is in GICs, none is invested in foreign markets, and the fund does not use the financial futures markets.

The asset mix for the fund is 19.5% in stocks, 66.7% in bonds, 11.3% in cash/equivalents and 2.5% in other vehicles.

Although the fund does not list a master trustee, officials note that there is only one manager, Boatmen's. That manager also serves as an investment management consultant to the fund.

Key personnel involved in fund administration are Alfred F. Graves, vice president of Boatmen's and the National Bank of St. Louis.

Mobil Corp.

	($ millions)
Total assets	2,100
Employer contributions	100
Benefit payments	80

NEW YORK—Mobil Corp. had $2.1 billion in employe benefit assets as of Sept. 30, 1979, which ranked the company 37th among the Top 100 sponsors and 17th among corporate sponsors.

The largest plan is the Mobil Oil Retirement Plan with $1.2 billion in assets followed by the savings plan with $830 million.

Employer contributions to all the plans totaled $100 million in 1979, and benefits paid to retirees were $80 million.

The nine managers which remained unchanged during the year are: Bankers Trust Co., New York; Capital Guardian Trust Co., Los Angeles; Chase Investors Management Corp., Citibank, N.A., Jennison Associates Capital Corp., and Morgan Guaranty Trust Co. all of New York; The Putnam Advisory Co., and State Street Research & Management Co., both of Boston; and United States Trust Co. of New York.

Mobil also uses 10 mutual funds for its savings plans. Employes have the option of selecting among the funds.

The company manages $115 million internally, an increase of $67 million in 1979. This is a passive fixed-income program which was started in 1978.

Mobil does not use financial futures, options or index funds. None of the assets is invested internationally, but it has $42 million in guaranteed income contracts.

The asset mix for total funds was 45% equities, 45% fixed income, and 10% cash equivalents as of September 30.

U.S. Trust acts as master trustee for the Omnibus Trust plan which has $20 million in assets.

Mobil does not use a consultant.

The key people in the pension area are C. J. Clune, manager, corporate investments; W.A. Hayes, assistant manager, corporate investments; R.P. Yee and A. H. Banagan Jr., both analysts.

Monsanto Co.

	($ millions)
Total assets	1,083
Employer contributions	97
Benefit payments	40

ST. LOUIS—Pension assets of the Monsanto Co. were $1.08 billion as of Sept. 30, 1979, which places the fund 85th as of that date among the 100 largest fund sponsors.

Among corporate funds in the Top 100 Monsanto ranked 45th.

The fund assets are divided among three plans: the Salaried Plan with $614 million, the Hourly Plan with $264 million and the Savings and Investment Plan with $193 million. There are some assets spread in other smaller plans.

Monsanto did not add nor delete investment management firms in 1979. The firms currently managing the fund assets include: Citibank; F. Eberstadt & Co.; Morgan Guaranty Trust Co., U.S. Trust; Lord, Abbett; Equitable Life Assurance, MacKay-Shields Financial

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Corp., Fischer, Francis, Trees & Watts; Brown Brothers Harriman; Metropolitan Life, all of New York; E.W. Axe & Co., Terrytown, N.Y.; Putnam Advisory Co., David L. Babson, State Street Bank, Pioneering Investment Management, all of Boston; Rosenberg Real Estate Equity Fund, San Francisco; T. Rowe Price, Baltimore; Delaware Investment Advisors, Philadelphia; St. Louis Union & Trust; and Travelers Insurance, Hartford.

None of the fund assets is internally managed nor is any of the assets indexed.

About $171 million of the fund is in GICs. The fund has about $1 million invested in foreign markets and about $500,000 in options.

The approximate asset mix of the total fund as of Sept. 30 was 60% in stocks, 12% in bonds, 5% in cash/equivalents, 3% in real estate and 20% in other vehicles including the GICs, insurance annuity reserves and miscellaneous investments.

The Northern Trust of Chicago serves as master trustee to the fund, and Frank Russell Co. is the investment management consultant.

The key personnel in the organization involved in fund management include: N.G. Jones, manager of pension assets; Dave Meagher, pension fund investment specialist; and Al Wolfarth, director of pension assets.

Mountain States Telephone & Telegraph

	($ millions)
Total assets	879
Employer contributions	126*
Benefit payments	24*

*fund estimate for entire year as of Dec. 31, 1979

DENVER—Pension assets of the Mountain Bell Telephone & Telegraph Co. increased $159 million to $879 million in the 12 months ending Sept. 30, 1979.

With total assets of $879 million, the company's fund ranked 95th as of that date among the 100 largest fund sponsors. Among corporate funds in the Top 100, Mountain States ranked 53rd.

All of the fund assets are held in one plan, and the assets are administered by 10 investment managers including: Bankers Trust, Clarens Associates, CIMCO, Equitable, Fayez Sarofim, First of Denver, D.J. Greene, Jennison Associates and United Bank of Denver. None of the assets is managed internally.

About $87 million of the assets is indexed. The fund has no assets in GICs, none invested in foreign markets, does not write options and does not use the financial futures markets.

Master trustee for the fund is Boston Safe Deposit and Trust Co.

The approximate asset mix of the total fund as of Sept. 30, 1979 was 53.7% in stocks, 30.3% in bonds and 16% in cash equivalents.

Key investment personnel involved in administering the fund are J.B. O'Boyle, treasurer; W.T. Danner, asst. treasurer; and J.L. Jones, district staff manager.

New England Telephone & Telegraph Co.

	($ millions)
Total assets	1,019*
Employer contributions	113*
Benefit payments	36*

*estimate

BOSTON—*Pensions & Investments* estimates the assets of the New England Telephone & Telegraph plan for pensions, disability benefits and death benefits at $1.019 billion as of Sept. 30, 1979.

The most recent asset figure available from the company was $910.4 million as of Dec. 30, 1978.

The September 30 estimated figure would rank the fund 88th among the Top 100 and 48th among corporate plans.

The company added three new managers during the year: First National Bank of Boston, John Hancock Mutual Life Insurance Co., and Boston Co., all of Boston.

The company hired Boston Safe Deposit & Trust as master trustee during 1979.

The continuing managers are Batterymarch Financial Management Corp., State Street Research and Management, both Boston, Brundage, Story & Rose, New York, Massachusetts Financial Services, Boston and Prudential Insurance, Newark, N.J.

The assets at Batterymarch are in an index fund, but the company declined to indicate the asset mix or whether any assets were in options, financial futures, international investments or GICs.

John Hadam, administrator, and James F. Crain, treasurer, oversee the operation of the fund.

New Jersey Division of Investment

	($ millions)
Total assets	5,171*

Employer contributions	614*
Benefit payments	238*

*estimate

TRENTON—The six retirement plans managed by the New Jersey Division of Investment had total assets estimated by *Pensions & Investments* at $5.171 billion as of Sept. 30, 1979, and thus rank 8th among the 100 largest plans and 5th among state and local government plans.

As of June 30, 1979, official figures placed the asset value at $5.040 billion at market value and $5.575 billion at book value.

The largest of the funds is the teachers' pension and annuity fund which had assets of $2.482 billion (book) and $2.211 billion at market value.

The Public Employes Retirement System has assets at market value of $1.642 billion and the book value of these was $1.797 billion.

The police and firemen's fund had market value assets of $1.005 billion, and the book value of these was the same.

The State Police Retirement System had assets of $99 million (market).

In addition, there is the Consolidated Police and Fire Fund which has been closed off to new contributions and which has assets of $86 million.

All of the assets are managed internally by a staff of two common stock portfolio managers, three fixed-income managers, two short-term managers and six analysts.

As of June 30, the assets were approximately 16.8% in common stocks, 75.9% in bonds and 7.3% in cash equivalents.

None of the assets is indexed, and the funds do not use financial futures. The only foreign investments used are some Canadian securities, and there is no master trustee.

A pilot options program is being implemented, according to Roland Machold, director of the investment division.

In addition to Mr. Machold, the investment staff includes William P. Mooney, deputy director; Gordon Kerr, consultant (bonds); Peter Pontelides, trading officer; Richard McGowan, supervising investment research analyst; Robert Innis, senior portfolio manager, and Stephen Kornrumpf, senior portfolio manager.

New York City Employes Systems

	($ millions)
Total assets	10,461
Emplyr./Employe contributions	1,443
Benefit payments	1,023

NEW YORK—The assets of the New York City employes' retirement systems, excluding the equity portions of the Teachers' and Board of Education systems, grew 4.4% during 1979 and as of September 30 ranked 5th among the 100 largest funds.

Among public funds they ranked 3rd.

The management of the assets, except for the teachers' variable annuity plan and the equity portion of the Board of Education plan, is administered by the City Comptroller's office, which selects managers and invests cash. The equity assets of the Teachers' and Board of Education funds are handled separately.

As of September 30 the New York City Employes Retirement System, the largest of the funds, had assets of $5.185 billion. The fixed-income portion of the New York City Teachers' Retirement System had assets of $2.89 billion, the Police Retirement System had assets of $1.754 billion, and the firemens' fund has assets of $441 million, and the fixed-income portion of the Board of Education fund had assets of $189 million.

In December the City dropped the Bank of New York as an equity manager. Earlier it had dropped U.S. Trust. The remaining managers, who are all New York-based, are Chemical Bank and Citibank, managing bond portfolios, and Alliance Capital Management, Bankers Trust, Citibank, MacKay Shields, Neuberger & Berman and Scudder, Stevens & Clark managing equity portfolios.

As of December 15, the Comptroller's office was managing $1.2 billion in short-term investments, but between September 30 and that date some $575 million had been committed to the equity and fixed-income markets, with $87 million going to equities.

Also as of December 15, $347 million of the assets was in an index fund managed by Bankers Trust.

The City has no assets in guaranteed return contracts, foreign markets or covered by options, but about 2% of the assets is invested in mortgages.

During the year Citibank was selected as master custodian for both the equity and fixed-income assets.

As of December 15 the asset mix was 14% equities, 74% fixed income and 12% cash and equivalents.

Rogers, Casey & Barksdale act as consultant to the Teachers' and Board of Education systems. A.G. Becker Inc. has been hired to monitor the Police fund.

In September Jack Meyer joined the Comptroller's office as deputy comptroller-asset management, to oversee the pension investments. He had been with Lionel D. Edie for seven years previously. The other key person in day-to-day administration of the funds is Robert Wilson, chief of the bureau of investments.

New York City Teachers Retirement System

	($ millions)
Total assets	1,438
Employer contributions	60
Benefit payments	52

NEW YORK—The fixed-income assets of the New York City Teachers Retirement System are managed by the City Comptroller's office. The equity assets in the variable annuity program are managed independently by the Teachers Retirement System.

The assets of the variable annuity program totaled $1.438 billion as of November 30, 1979, ranking it 63rd among the Top 100 funds and 29th among public employe funds.

The variable annuity plan added two managers during 1979 and dropped two.

The plan invested $108 million in Wells Fargo's yield tilt fund, and it gave $21 million to Value Line As-

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set Management. Manufacturers Hanover Trust and United States Trust were dropped.

The other managers for the annuity plan are Alliance Capital Management, New York; Batterymarch Financial Management, Boston; Bernstein Macaulay Inc., and Citibank, New York; Prudential Insurance, Newark, N.J.; and Wertheim Asset Management, New York.

Batterymarch manages $162 million in its index fund and has $42 million under active management.

At present the variable plan has no assets invested in foreign markets, but it is examining whether such a move is legally possible, according to Wally Sullivan, executive director.

The fund is also looking into the possibility of using options and securities lending, Mr. Sullivan said. It is not yet considering using financial futures.

Irving Trust is the master trustee for the managers except for Prudential Insurance and Citibank.

Rogers, Casey & Barksdale Inc. screens potential new managers, for the fund and also monitors the investment performance of existing managers, Mr. Sullivan said.

Patrick Kiernan, assistant executive director, is the other person involved in the day-to-day administration of the assets.

New York State Common Retirement Fund

	($ millions)
Total assets	11,682*
Employer contributions	1,198
Benefit payments	569

*book value

ALBANY—The New York State Common Retirement Fund hired five equity advisers last year to boost the performance of its almost $2 billion in equity assets.

The new advisers, effective February 1980, are: Alliance Capital Management Corp.; Lazard Freres & Co; Oppenheimer Capital Corp., L.F. Rothschild, Unterberg, Towbin, and J. & W. Seligman & Co., all of New York.

Each manager received $75 million, transferred from four other common retirement fund advisers: U.S. Trust Co., Bank of New York, Morgan Guaranty Trust Co. and Chemical Bank, New York. The other equity adviser for the fund is Dreyfus Management Inc., New York.

The five additional managers were named to try and even out the amount of assets each adviser handled, and to "try to get improved returns incrementally," as Madelon Talley, director of investments and cash management explained.

U.S. Trust acts as adviser for the fixed income funds which are internally managed.

For the 12 months ending Sept. 30, 1979, The New York State Common Retirement Fund's inhouse index fund had an annual rate of return of 13.3%, tracking the S&P 500.

The index fund was started in August 1978 because the retirement fund was dissatisfied with the performance of the common stock advisers.

As of Sept. 30, 1979, the assets of the inhouse index fund were $575 million, an increase of about $20 million from Sept. 30, 1978. The increase was attributed to market changes.

John Mauhs, in charge of operations and administration of the systems, explained that the index fund is "doing better than all of our advisers, except Chemical Bank, which had an annual rate of return of 13.4% from Sept. 30, 1978 to Sept. 30, 1979."

To date, the fund is meeting expectations of saving the system $350,000 in annual management fees.

In 1979, Frank Grady resigned as chief investment officer to rejoin United States Trust Co. A successor to Mr. Grady has not yet been named.

The total asset figure of $11.682 billion represents assets from the N.Y. State Employes Retirement System and the N.Y. Policemen's and Firemen's Retirement System.

Of the total, $10.280 billion is internally managed, and the balance is apportioned to the non discretionary advisers. As of Sept. 30, 1978, total assets were $10.317 billion, of which $9.007 billion was internally managed.

The Retirement Fund ranked 4th among the 100 largest fund sponsors and 2nd among public fund sponsors.

The fund does not invest in GICs, foreign markets, or financial futures. It does not write options against any equity holdings and does not use an investment management consultant.

The sole trustee of the fund is Edward V. Regan, state controller.

As of Sept. 30, 1979, the asset mix was 17% stocks, 57% bonds, 11% cash equivalents and 15% mortgages.

Thomas Flanigan is investment officer.

New York State Teachers Retirement System

	($ millions)
Total assets	6,463
Employer contributions	572
Benefit payments	298

ALBANY—Pension assets of the New York State Teachers Retirement System grew $622 million in the first nine months of 1979.

With total assets at $6.463 billion, the fund ranked 6th among fund sponsors in the Top 100 and 4th among public pension plans. As of Dec. 31, 1978, total assets were $5.841 billion.

All of the plan's assets are internally managed. However, the fund does use Lionel D. Edie & Co. Inc., New York, as an equity adviser.

Employer contributions for the fiscal year ended June 30, 1979, were $572 million while benefits paid to retirees totaled $298 million.

The fund writes $10 million in options against equity holdings—almost double the amount during 1978. The fund does not use financial futures, a master trustee or an index fund.

None of the assets is invested in GICs. As of Sept. 30, 1979, $196 million was invested in Canadian securities, the only foreign securities the fund is allowed to invest in, an increase of about $58 million over the year before. As of Dec. 31, 1978, the fund had $137.8 million invested in Canadian securities.

As of Sept. 30, 1979, the approximate asset mix of the fund was 31.1% stocks, 44.3% bonds, 5.1% cash/equivalents and 19.5% in mortgages.

The key executives responsible for the administration of investment management are: Harold D. Langlitz, executive director; Harry L. DuBrin Jr., assistant executive director, and Edward Reno Jr., securities investment officer.

New York Telephone Co.

	($ millions)
Total assets	2,300
Employer contributions	285
Benefit payments	111

NEW YORK—Pension assets of

New York Telephone increased almost $500 million from 1978 to 1979, or 27.5%.

With total assets of $2.3 billion as of Sept. 30, 1979, New York Telephone ranked 33rd among the Top 100 fund sponsors. Among the corporate sponsors, the company ranked 14th.

In 1979, the company's contributions to the plan totaled an estimated $285 million with approximately $111 million paid out in benefits.

One quarter of the pension fund, or $583 million, is indexed. American National Bank & Trust Co. of Chicago handles the index for the company as well as acting as active manager.

The other fund managers which remained unchanged during the year are: Batterymarch Financial Management Corp., Boston; Brown Brothers Harriman & Co., Citibank, F. Eberstadt & Co. and Manufacturers Hanover Trust Co., all New York; Massachusetts Financial Services Co., Boston; Trust Co. of the West, Los Angeles; United States Trust Co. and Wertheim Asset Management, both of New York.

At the end of November, New York Telephone consolidated the reporting for the fund by hiring Manufacturers Hanover as master trustee.

The asset mix for the fund as of September 30 was 57% equities, 20% fixed income, 2% real estate and 21% cash equivalents. The company decreased its equity holdings 5% (from 1978 to 1979) and increased its cash 6%.

None of the assets is invested internally or internationally. The fund does not write options or use financial futures.

In the Spring of 1979, Joseph Clines moved to the pension fund area as a general financial supervisor.

He has been part of the treasury department as a financial planner. He replaced Robert Shultz who moved to Western Electric, another Bell System affiliate.

The other key personnel at New York Telephone are L.R. Smart, assistant vp and assistant treasurer, and A.A. Parra, assistant treasurer.

North Carolina Retirement Systems

	($ millions)
Total assets	3,940
Employer contributions	256
Benefit payments	182

RALEIGH—The North Carolina Retirement Systems began lending securities last year, and are earning more than $100,000 a month in income from the program, according to Christopher S. Moore, deputy treasurer and director of the investment and banking division.

The fund ranks 21st in the top 100 and 13th among public funds.

The systems are in the process of setting up a program to write covered call options, which should be ready early this year.

The fund had 87% of its assets in fixed income, 11% in stocks and 2% in cash and equivalents.

The systems include seven different plans, the largest of which is the $3.2 billion state teachers and employes fund.

All assets are managed internally. Alliance Capital Management in New York and Thorndike, Doran, Paine & Lewis in Boston serve as equity advisers, and Duff & Phelps in Chicago serves as fixed-income adviser.

Chase Manhattan Bank in New York is trustee for the fixed-income assets, and First Union National Bank is trustee for equity assets.

In charge of administration is Christopher S. Moore, deputy treasurer and director of the investment and banking division.

Public Employes Retirement System of Ohio

	($ millions)
Total assets	4,300
Employer contributions	430
Benefit payments	220

COLUMBUS—Ohio's second largest municipal pension system increased its assets by 13%—$300 million over last year—while in March, its executive director Robert McLaughlin publicly pushed for voting rights regarding a proposed acquisition of McGraw-Hill by American Express Co.

Without these voting rights, the fund would not be receiving its full shareholder rights, the executive director contended.

With total assets of $4.3 billion, the fund ranked 16th among the Top 100 and 9th among the government funds.

All of the fund's fixed assets are managed internally with Scudder, Stevens and Clark, New York, jointly managing equities.

The asset mix of the fund on Sept. 30, 1979 was 27% stocks; 69% bonds; and 2% cash equivalents.

The fund does not use financial futures, foreign markets, options or GICs.

Key executives responsible for the daily administration are Mr. McLaughlin, investment officer; Gregory Bauer, assistant investment officer, equities; and Richard W. Moore, assistant investment officer, bonds.

Ohio School Employes Retirement System

	($ millions)
Total assets	994*
Employer contributions	69*
Benefit payments	51*

*estimate

COLUMBUS—Pension assets of the Ohio School Employes Retirement System were estimated at $994 million, a 12.7% increase over 1978. This ranked the fund 92nd in the Top 100 and 38th among public funds nationally.

A portion of the fund is managed internally with Bankers Trust Co., New York, managing part of the equity assets. The 1979 Money Market Directory lists 8% of the assets in cash and equivalents, 24% equities and 47% fixed income.

R. Jack Cooper is listed as the investment officer for the fund.

Ohio State Teachers Retirement System

	($ millions)
Total assets	4,611*

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Employer contributions	319*
Benefit payments	294*

*estimate

COLUMBUS—Pension assets at the State Teachers Retirement System of Ohio totaled $4.611 billion, an increase of 13% over the same period last year.

The fund ranked 12th among the Top 100 and 6th among the public funds.

The fund consists of one pension plan which is totally managed in-house. Thorndike, Doran, Paine & Lewis Inc., Boston, acts as investment adviser.

On September 30, the fund had 35.4% in stocks, 37.2% bonds, 8.5% cash equivalents and 18.9% mortgages.

There is also a $50 million options writing program used against equities.

No funds are indexed, in GICs, foreign markets or financial futures.

Employe contributions made into the fund for the fiscal year ending June 30, 1979 amounted to $209 million.

Key executives of the fund are Alan D. Browning, director of investments; John Gunthord, equity portfolio manager; and Dennis Clary, fixed income portfolio manager.

Oregon Public Employe Retirement System

($ millions)	
Total assets	1,454
Employer contributions	na
Benefit payments	75

SALEM—Pension assets for the State of Oregon Public Employe Retirement System increased over $254 million—21%—during the year ended Sept. 30, 1979.

The state's fund ranked 62nd with the total assets at $1.454 billion in the 100 largest sponsors and 28th among the public funds in the survey.

The fund is managed by the same 10 firms that handled the assets last year: Batterymarch Financial Services, David L. Babson & Co., George D. Bjurman & Associates, Columbia Management Co., Rosenberg Capital Management, Fayez Sarofim & Co., BEA Associates, Irving Harris Associates Inc., Quest Advisory Corp. and William D. Witter & Co.

Sixty-seven percent of the assets, which is the fixed-income portion, is managed internally the same as in 1978.

There are no foreign investments, no guaranteed investment contracts and no indexed assets.

The fund does not write options against equity holdings nor do they use financial futures.

The First National Bank of Oregon is the master trustee and Frank Russell Co. Inc. and Wilshire Associates are the primary outside consultants.

As of Sept. 30, 1979, the approximate asset mix was stocks 33%, bonds 40%, cash and equivalents 3% and mortgages 24%.

The key administrators for the pension fund management are James L. McGoffin, director; Clay Myers, Oregon state treasurer; Roger S. Meier, chairman-Oregon investment council; James C. George, investment manager and new to the team, William Unverzagt, investment officer.

Pacific Gas & Electric

($ millions)	
Total assets	1,248*
Employer contributions	80
Benefit payments	26**

*estimate; **retirement plan only

SAN FRANCISCO—As part of a three-year plan to diversify assets, Pacific Gas & Electric named T. Rowe Price Associates, Baltimore to the roster of seven money managers currently handling pension fund assets estimated at $1.010 billion. As of Dec. 31, 1978 the assets totaled $898.6 million.

PG&E ranked 73th among the Top 100 fund sponsors and among the corporate funds ranked 36th in 1979.

"We will probably add two additional money managers in 1980," said Michael J. Bonner, administrator, employe benefit finance. They will join FMR Investment Management Service Inc. Boston and IDS Advisory Corp. Minneapolis named in 1978, and four other investment managers: Fischer, Francis, Trees & Watts, New York; Dodge & Cox Inc., San Francisco (savings funds only); Metropolitan Life Insurance Co., New York and Prudential Insurance Co., N.J.

The estimated total asset figure includes a PG&E savings plan which had total assets of $238.3 million as of Dec. 31, 1978.

As of December 31, 1978, 63% of PG&E's pension fund assets were in equities; 5% in bonds; 5% in cash/equivalents and 27% in insurance company general contracts.

State Street Bank & Trust Co. is master trustee for the funds.

Frank Russell Co. is used as investment management consultant for the fund.

None of the pension fund assets is managed internally, nor are assets indexed.

PG&E does not use options or financial futures.

There are no guaranteed return contracts written and investment overseas "is not significant," according to Mr. Bonner.

Key executives responsible for administration of the funds are: Stanley T. Skinner, executive vp; James Doudiet, treasurer; Frank A. Peter, comptroller; Richard K. Miller, vp, personnel & general services and Michael J. Bonner, employe benefit finance.

Pacific Telephone and Telegraph Co.

($ millions)	
Total assets	2,541
Employer contributions	318*
Benefit payments	94*

*estimated

SAN FRANCISCO—Pacific Telephone & Telegraph Co., 27th among the 100 largest fund sponsors with total assets of $2.54 billion in two plans, named Bank of America as master trustee effective Jan. 1, 1980.

The telephone company fund was ranked 10th among corporate funds in the *P&I* Top 100.

Assets in the Pacific Telephone fund totaled $2.49 billion as of Sept. 30 and a second plan included in the total, a retirement fund for employes of Nevada Bell, has assets of $50 million.

Bank of America will also be master trustee for the Nevada Bell pension plan.

Pacific Bell also named two new managers in 1979, Rosenberg Real Estate Equity Fund Corp. and its parent Rosenberg Capital Management.

They joined a roster for the fund of 17 money managers used by the fund: BA Investment Management Corp., San Francisco; Bankers Trust Co., New York; CMB Investment Counselors, Beverly Hills, Ca.; Crocker Investment Management Corp., San Francisco; Dodge & Cox, San Francisco; Eastdil Advisers, Inc., Eberstadt Asset Management and Fischer, Francis, Trees & Watts, New York; FMR Investment Management Service, Boston; IDS Advisory Corp., Milwaukee.

Also: Kemper Financial Services, Chicago; Pacific Investment Management Co., Newport Beach, Ca.; Scudder, Stevens & Clark, New York; State Street Research & Management Co., Boston; Travelers Investment Management Co.,

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Hartford; Wells Fargo Investment Advisors, San Francisco; and Western Asset Management Co., Los Angeles.

The funds' asset mix includes 44.7% equities, 38.2% bonds; 14.5% cash equivalents and 2.6% real estate.

Pacific Bell has no foreign investments nor guaranteed return contracts. None of the assets is managed internally and the funds do not use options or financial futures.

Frank Russell Co. acts as investment management consultant to the fund.

Key executives responsible for administration of the fund are: A.C. Cassidy, vp finance; H.J. Bennett, assistant vp-finance and R.E. Holmes, district staff manager-pension fund.

Pennsylvania Public School Employes Retirement System

	($ millions)
Total assets	4,395
Employer contributions	180
Benefit payments	162

HARRISBURG—The Pennsylvania Public School Employes Retirement System began managing assets internally for the first time in 1979.

The system is investing $25 million in GNMAs internally. And according to James A. Perry, assistant executive director, the system's board has made a decision to eventually have much more of the fund managed internally.

The system had assets of $4.395 billion as of Sept. 30, 1979, ranking it 15th in the Top 100 funds, and 8th among public funds.

The Pennsylvania state legislature has been considering a bill which would give ad hoc cost of living increases of between 5% and 31% to retirees. The last such increases were given in 1975.

The fund's current money managers are Mellon Bank in Pittsburgh and Fidelity Bank in Philadelphia.

Mellon manages stocks and bonds for the fund and Fidelity handles mortgages. Mr. Perry said the system may hire more managers in the near future.

About 62.4% of the assets are in bonds, 18.4% are in stocks, 13.6% in real estate and 5.6% in cash and reserves. State law forbids the fund from being more than 25% in equities.

No other investment media are used, and no master trustee is used. Barry C. Hixon, investment coordinator, is an outside investment consultant.

M. Andrew Sheffler is executive director of the system. R.J. McElroy is director of the bureau of fiscal control.

Pennsylvania State Employes Retirement System

	($ millions)
Total assets	2,340
Employer contributions	180
Benefit payments	162

HARRISBURG—The Pennsylvania State Employes' Retirement System began investing in Ginnie Maes during 1979, according to Frances Crimbly, assistant secretary of the retirement system. The system also began running short-term money inhouse.

During the year, A.G. Becker was also brought in to provide performance evaluation services. Also during the year, Richard Witmer retired as secretary of the system and was replaced by Robert I. Cusma.

Pension assets at the system were $2.34 billion at the end of September 1979, up from $2.183 billion the previous year. The system ranks 32nd among Top 100 largest funds, and 17th among public funds.

During the coming year, the system will be considering new advisers, according to Ms. Crimbly, although she is unsure whether any will be hired. Currently, Mellon Bank in Pittsburgh serves as adviser for equities and bonds, and Fidelity Bank in Philadelphia serves as adviser for mortgages.

Also, the Pennsylvania state legislature is considering providing ad hoc cost of living benefit increases to retirees.

The fund is invested 63.5% in bonds, 18.4% in stocks, 10.8% in real estate and 7.3% in cash equivalents.

Larry E. Barbour is chief of accounting.

According to R. E. Bonnell, treasurer, the members of the new firm had managed Phillips' assets at the bank and the company decided to go with them in the new firm.

Phillips' assets of $1.100 billion ranks it 83rd among the 100 largest funds, and 44th among corporate funds.

The assets come from two plans, the $660 million retirement income plan, and the $440 million thrift plan.

Besides the new manager, the assets are managed by Aetna Life & Casualty, Hartford; Citibank, New York; Equitable Life Assurance Society, New York; Harris Bank and Trust, Chicago; MacKay Shields Financial Management, Metropolitan Life, and Morgan Guaranty, New York; Travelers Insurance, Hartford; and Wells Fargo Investment Advisers, San Francisco. The First National Bank of Bartlesville, Oklahoma, is trustee for the thrift plan.

About $100 million of the pension assets is indexed, and about $43 million is in GICs. Approximately $7 million is invested in foreign markets through Morgan Guaranty's commingled fund.

The fund does not use options or financial futures and it has no master trustee.

As of September 30 the asset mix was approximately 54% in common stocks, 10% in bonds, 8% in cash and equivalents, 1% in real estate, 29% in insured accounts and GICs.

O. W. Armstrong, vp-treasurer, and R. W. Sellers, director-pension investments, are the key personnel involved in administration of fund investments with Mr. Bonnell.

Phillips Petroleum Co.

	($ millions)
Total assets	1,100
Employer contributions	83
Benefit payments	23

BARTLESVILLE, OK.—Phillips Petroleum Co. added one new manager during 1979—Barrow, Hanley, Mewhinney & Strauss, Dallas, formed by four former members of the investment staff at Republic National Bank in Dallas.

Procter & Gamble Co.

	($ millions)
Total assets	899*
Employer contributions	99
Benefit payments	57

*estimate

CINCINNATI—The Procter & Gamble Co.'s sole employe retirement plan is a defined contribution plan invested solely in company stock unless insurance company annuities are requested by participants.

The company reported that as of June 30 the assets were valued at $874 million, and *Pensions & In-*

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Bell System biggest by far

By far the biggest corporate employe benefit fund sponsor in the U.S. is the American Telephone & Telegraph's Bell System.

Twenty-five Bell System companies are among the leading 1,000 fund sponsors identified in this issue, and they have assets totaling $27.094 billion.

Rank	Bell Company	Assets ($ millions)
1.	Western Electric	4,828
2.	Pacific Telephone	2,541
3.	Bell System Savings Plan	2,350
4.	New York Telephone	2,300
5.	Southwestern Bell Telephone	1,894
6.	Southern Bell Telephone	1,461
7.	American Telephone & Telegraph	1,261
8.	South Central Bell Telephone	1,207
9.	Illinois Bell Telephone	1,103
10.	New England Telephone	1,019
11.	Bell Telephone of Pennsylvania	888
12.	Mountain States Telephone	879
13.	Michigan Bell Telephone	694
14.	Ohio Bell Telephone	680
15.	New Jersey Bell Telephone	648
16.	Northwestern Bell Telephone	540
17.	Bell Telephone Laboratories	523
18.	Pacific Northwest Bell Telephone	456
19.	Sandia Laboratories	375
20.	Southern New England Telephone	370
21.	Chesapeake & Potomac Telephone (Md.)	283
22.	Chesapeake & Potomac Telephone (Va.)	253
23.	Wisconsin Telephone Co.	214
24.	Chesapeake & Potomac Telephone (D.C.)	202
25.	Cincinnati Bell Telephone	125
	Pensions & Investments, 1/21/80	**Total 27,094**

Top 25 Taft-Hartley funds/sponsors

Rank	Fund/Sponsor	Assets ($ millions)
1.	Western Conf. of Teamsters	2,600
2.	Teamsters Central States	2,021
3.	United Mine Workers (HQ)	700
4.	Electrical Workers (Arlington, Va.)	613
5.	Boilermakers, Blacksmiths	405
6.	Bakery & Confectionery Wrks	390
7.	Intl. Operating Engineers (Ma.)	358
8.	Electrical Industry Joint Board	357
9.	Intl. Ladies Garment Workers Union	330
10.	Hospital & Health Care Workers	327
11.	Northern California Carpenters	316
12.	Electrical Workers (IBEW) (D.C.)	314
13.	So. California Food Workers	311
14.	Teamsters Council #10	284
15.	So. California Operating Engineers	275
16.	Retail Employes Local 1199	264
17.	Intl. Assn of Machinists District #15	255
18.	Chicago Food Workers	250
19.	Intl. Longshoremen's Assn., N.Y.	247
20.	N.Y.C. District Council of Carpenters	243
21.	So. California Carpenters	223
22.	No. California Food Workers	215
23.	Teamsters, Washington D.C.	214
24.	Chicago Laborers	202
25.	Teamsters Locals 560, 617, 614	183
	Total:	**11,540**

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restments estimated that they had risen to $899 million by September 30.

This ranked the fund 93rd among the Top 100, and 51st among corporate sponsors.

Because of the lackluster performance of the company's stock, the assets of the fund were actually slightly lower as of June 30 than on Sept. 30, 1978 when they were $888 million.

Total employer contributions to the plan in 1979 were $99 million, and the company paid benefits of $57 million during the year.

All of the assets are internally managed.

Edwin H. Eaton Jr., treasurer, is responsible for the day-to-day administration of the plan.

RCA Corp.

	($ millions)
Total assets	1,300
Employer contributions	110
Benefit payments	68

NEW YORK—RCA Corp.'s retirement assets grew $206 million in the 12 months ending Sept. 30, 1979, for a total of $1.3 billion up from $1.094 billion for the previous year.

Assets of the Retirement Plan were $1.183 billion, as of Sept. 30. RCA Income Savings Plan assets were $100 million, and all other plans had a total of $17 million. As of Sept. 30, 1979, the RCA funds ranked 71st among the 100 largest fund sponsors. Among corporate sponsors funds in the Top 100, RCA ranked 34th.

RCA's index fund at Chase Manhattan Bank, New York, has grown to $78 million, up from $65 million the previous year.

During 1979, RCA added The Travelers Insurance Co., and Aetna Life & Casualty Co., both in Hartford, for GICs.

The fund also has GICs and a general account at Equitable Life Assurance Society of the U.S., New York. Total GIC investments are $129 million.

Other RCA managers are: Endowment Management & Research Corp., Boston and Fayez Sarofim & Co., Houston, for equities; Harris Trust & Savings Bank, Chicago, and State Street Research & Management, Boston, each manage fixed income and equity investments.

Morgan Guaranty Trust Co., New York is a balanced manager, and Scudder, Stevens & Clark, New York, is a fixed income manager.

None of the assets at RCA is internally managed. The company does not use financial futures and does not write options against any equity holdings. RCA has $12 million invested in foreign markets, through Morgan Guaranty's commingled account. The foreign investments were not increased during the year.

A master trustee does not oversee the fund, but RCA does use Frank Russell Co. Inc., Tacoma, Wa. as an investment management consultant.

As of Sept. 30, 1979, asset mix was 48% stocks, 44% bonds, 9% cash/equivalents, and 1% real estate.

The key executives responsible for the administration of asset management are: R.D. Isinger, secretary, RCA benefits committee; Melvin Cornfield, vp and treasurer, and C.C. Ellis, senior vp.

Republic Steel Corp.

	($ millions)
Total assets	840
Employer contributions	100
Benefit payments	90

CLEVELAND—With total employe benefit assets of $840 million Republic Steel Corp. ranks 100th among the sponsors of the 100 largest employe benefit programs and 56th among corporate sponsors.

The assets are $755 million in pension plans and $85 million in savings and investment plans.

Of the total, some $520 million is managed internally, but none is indexed, invested in foreign securities or in GICs. Also, neither options nor financial futures are used by the fund.

The outside managers for the fund are Batterymarch Financial Management Inc., Boston; Delaware Investment Advisers, Philadelphia; Harris Trust, Chicago; John Hancock Mutal Life, Boston; Lord, Abbett & Co., New York; T. Rowe Price & Associates, Baltimore; and Scudder, Stevens & Clark Inc., New York.

As of Sept. 30, 1979, the assets were 60% in stocks, 30% in bonds and 10% in cash equivalents.

J. J. Loftus, executive vp, and Eugene P. Walker, director-investments, are the key executives overseeing the investments.

Rockwell International

	($ millions)
Total assets	2,494*
Employer Contributions	270*
Benefit payments	99*

*estimate

PITTSBURGH—The total assets of Rockwell International's defined benefit and savings plans climbed almost 20% to $2.49 bil-

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lion, between Sept. 30, 1978 and Sept. 30, 1979, *Pensions & Investments* estimates. This would rank the fund 29th among the Top 100 and 11th among corporate funds.

P&I estimates that the defined benefit plan assets climbed to $1.9 billion, and that the savings plan assets climbed to $589 million.

Managers for Rockwell's assets include Aetna Life & Casualty, Hartford; Brown Brothers Harriman, New York; Capital Guardian Trust, Los Angeles; Chase Investors Management, New York; CG Investment Management, Hartford; First National Bank in Dallas; Harris Trust, Chicago; John Hancock Insurance Co., Boston; Massachusetts Financial Services Inc., Boston; Mellon Bank, Pittsburgh; Morgan Guaranty, New York; Provident Capital Management, Philadelphia; Putnam Advisory, Boston; Fayez Sarofim, Houston; Scudder, Stevens & Clark, New York; Seattle First National Bank; Security Pacific Bank, Los Angeles; Security Peoples Bank, Erie, Pa.; Shawmut Bank, Boston; Stralem & Co., New York; TA Investment Management, San Francisco; Waite & Correnti, and Western Asset Management, Los Angeles.

In addition, the National Bank of Detroit manages a savings plan for the company, and some of the assets are in insured plans.

According to *P&I* records, Rockwell hired at least two new managers during the year—Brown Brothers Harriman and Provident Capital Management—and dropped or cut back the assets at several.

Chase Manhattan Bank is the master trustee for the employe benefit assets, and the National Bank of Detroit is trustee for the savings plans.

According to reports, Rockwell terminated the Frank Russell Co. as investment management consultant during 1979.

E.W. Altstaetter, staff vp-pensions, insurance and risk management, is the executive responsible for the administration of the assets.

San Francisco City & County Employes Retirement System

	($ millions)
Total assets	868
Employer contributions	110
Benefit payments	94

SAN FRANCISCO—The San Francisco City & County Employes Retirement System increased its investment in common stocks by one-third in 1979, and by the year-end equities were expected to represent 30% of assets which totaled $867.5 million as of September 30.

The fund, which ranked 96th among the top 100 fund sponsors and 39th among public funds, has the highest equity exposure of any government fund in the state of California, according to George B. Springman, chief investment officer. Contrary to current investment strategies of many other public funds, "We think common stocks are the best hedge against inflation," Mr. Springman said.

The San Francisco City and County fund also increased payments to retirees by more than 10% during 1979. This was in part caused by Proposition 13-related increases in retirements and also due to pension cost increases, according to the investment officer.

As of December 1978, management of the equity portfolio has been done internally and with voter approval in November 1979 of a charter amendment liberalizing investment guidelines, the fund will begin writing options against its equities.

San Francisco pension fund officials are interviewing investment management firms. They are expected to make a decision on whether to retain an outside firm or continue internal management after the first of the year.

Coldwell Banker Management Co., Los Angeles, currently manages the fund's investments in real estate, which is about 5% of total fund assets.

Approximately 60% of the funds assets are in bonds. Cash equivalents represent another 5% of total fund assets.

None of the assets is indexed, nor does the fund use guaranteed return contracts or financial futures.

The fund is prohibited by law from investing in foreign markets.

Master trusteeship of the fund is held by the treasurer of the city and county of San Francisco. Crocker Investment Management Corp. is investment management consultant.

Key executives involved in overseeing investment management and administration of the funds are Mr. Springman, Jack B. Stoufer, assistant chief of investments and Fred A. Sebastelli, security analyst.

Sears, Roebuck & Co.

	($ millions)
Total assets	2,676
Employer contributions	260
Benefit payments	136

CHICAGO—After two years of study, Sears initiated trading in financial futures during 1979 to limit its interest rate risk for the pension and profit sharing plans.

Initial futures activities were in hedging government backed securities, such as Ginnie Maes, Treasury-bills, bonds and notes.

With total assets of $2.676 billion, Sears ranked 25th in the Top 100 and 9th among the corporate funds.

Sears ended its year with 78% of its assets in the equity market and 100% of its assets managed internally by Sears Investment Management Co.

Asset mix for the fund was 78% stocks, 7% bonds and 15% cash equivalents.

The two plans which comprise the assets are the Savings and Profit Sharing Fund of Sears Employes, with $2,087 million in assets, and the Sears Pension Plan with $589 million.

The plan holds no company stock, but the Profit Sharing Fund has 62% of its assets in Sears stocks, compared with 55% last year.

The funds do not have a master trustee or investment consultant. They also do not participate in in-

dexing, options, GICs or the foreign market.

Key executives of the fund are David V. Dootson, president and Seymour N. Lotsoff, fixed income vp.

Shell Oil Co.

	($ millions)
Total assets	2,162
Employer contributions	113
Benefit payments	47

HOUSTON—Shell assets increased $421 million over last year's period and also saw the addition of two new money managers, Fayez Sarofim of Houston and Aetna Life & Casualty.

With total assets of $2.162 billion the company ranked 36th in the Top 100 and 16th among the corporate sponsors.

The fund uses a diversified investment style involving 17 managers for their two plans. They are: Aetna Life Insurance, Batterymarch, Crocker Investment Management Co., Dodge & Cox, Equitable Life Assurance, Fayez Sarofim, First City National Bank of Houston, First National Bank in Dallas, First National Bank in Boston, John Hancock, Kemper Financial, Manufacturers Hanover, National Bank of Detroit, Prudential Insurance Co., Republic National Bank of Dallas, Scudder, Stevens & Clark and Wells Fargo.

Shell also manages $301 million internally.

The fund indexes $82 million and has $62 million in GICs. It does not use financial futures, options, or participate in the foreign equity market.

As of September 30, assets were invested in 57.7% stocks, 29.1% bonds, 5.3% cash equivalents, 5.1% real estate and 2.8% other.

Frank Russell & Co. is the investment management consultant. Shell does not have a master trustee.

Executives responsible for the daily activities of the fund are R.S. MacIntire, administrator; M.M. Planche, staff investment specialist; K.T. Ng, senior investment specialist; and R.J. Stapleton, investment specialist.

South Carolina Retirement System

	($ millions)
Total assets	1,632
Employer contributions	107
Benefit payments	85

COLUMBIA—The South Carolina Retirement System had assets of $1.632 billion at the end of September 1979, an increase of 19% over the $1.371 billion the previous year.

The system ranks 56th in the Top 100 funds, and 24th among state and local plans.

All assets are managed inhouse. Jamison, Eaton & Wood Inc. in Denville, N.J. serves as outside adviser.

The system is invested 90% in bonds and 10% in cash and equivalents, mostly T-bills. State law prohibits equity investments.

No changes are being planned in the investment operation, according to state treasurer Grady L. Patterson Jr. Purvis Collins is the administrator of the system.

South Central Bell Telephone Co.

	($ millions)
Total assets	1,207
Employer contributions	133
Benefit payments	30

BIRMINGHAM—South Central Bell Telephone Co. combined its two pension funds during 1979 because it is easier to administer as one fund, according to O.K. Williamson, secretary and treasurer of the firm.

Pension assets totaled $1.207 billion, making South Central Bell the 75th largest sponsor among 100 sponsors, and 38th among corporate sponsors. Assets increased 16.5% during the year.

The fund's managers remained the same during the year. Balanced managers are Bankers Trust Co., First Tennessee Bank, Memphis, First Kentucky Trust Co., Louisville, and First National Bank of Birmingham, Loomis, Sayles & Co. Inc. Boston is an equity manager.

The asset mix also remained basically the same. It is 55% in stocks, 35% in bonds, 9% in cash and equivalents and 1% in real estate, royalties and other investments.

No other investment media are used. Investment management consultants and master trustees also are not employed.

Ken Patterson is assistant treasurer and Mary J. Gunter is district staff manager.

Southern Bell Telephone & Telegraph Co.

	($ millions)
Total assets	$1,461
Employer contributions	196
Benefit payments	31

ATLANTA—Pension assets of the Southern Bell Telephone & Telegraph Co. leaped by almost $400 million—33.8%—during the 12 months ended September 30, 1979.

With total assets of $1.46 billion, the company's fund ranked 60th as of that date among the 100 largest fund sponsors. Among corporate funds in the *P&I* Top 100, Southern Bell ranked 30th.

Almost 25% of the fund's assets is indexed with Batterymarch Financial Management Inc., Boston.

In addition, the fund has five balanced managers: Citizens & Southern National Bank, First National Bank of Atlanta, and Trust Co. Bank, all in Atlanta; Wachovia Bank & Trust, Winston-Salem, N.C.; and North Carolina National Bank (NCNB), Charlotte, N.C.

South Carolina National Bank, Columbia, S.C., manages equities using a quantitative approach, while Bankers Trust Co., New York, and Pacific Investment Management Co., Newport Beach, Ca., manage fixed income assets.

In addition, the fund has between $50 million and $60 million invested in real estate through Wachovia Bank and Trust.

As of September 30, 51% of the assets was invested in equities, 35% was in bonds, and 10% was in cash and equivalents, with between 4% and 5% in real estate.

Smith Barney, Harris Upham & Co. Inc. acts as investment consultant to the fund, monitoring the in-

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vestment activities of the managers.

None of the assets is managed internally, invested overseas, or invested in guaranteed return contracts. The fund does not use options or financial futures. Southern Bell does not have a master trustee.

The key executives responsible for the administration of asset management are A. Max Walker, vp and treasurer; Robert N. Dean, assistant vp and assistant treasurer; and H. Hodgson Thomas, district staff manager.

Southwestern Bell Telephone Co.

	($ millions)
Total assets	1,894
Employer contributions	252
Benefit payments	67

ST. LOUIS—Southwestern Bell Telephone Co. had pension assets of $1.894 billion on Sept. 30, 1979, ranking it 47th among top 100 funds and 23rd among corporate funds.

All assets are in the employes plan for pension, disability benefits and death benefits.

Money managers for the plan include Mercantile Trust Co. in St. Louis, First National Bank in Dallas, St., Louis Union Trust Co., Boatmen's National Bank of St. Louis, Republic National Bank of Dallas, and Commerce Bank of Kansas City.

All have been money managers for several years. No assets are managed internally.

The assets are 46% in stocks, 31% in bonds, 21% in cash and equivalents, 1% in real estate and 1% in other investments. No significant changes were made in the asset mix this year, according to the firm.

Arthur J. Seewoester is the treasurer.

Sperry Corp.

	($ millions)
Total assets	1,080
Employer contributions	68
Benefit payments	48

NEW YORK—Sperry Corp.'s employe benefit assets stood at $1.08 billion on September 30 an increase of 31% over the $825 million in September 1978.

Sperry ranked 86th among the Top 100 plan sponsors and 46th among corporate sponsors.

The largest pension plans are the Sperry retirement program part "A," with $624 million in assets and part "B," which is a savings plan with $268 million in assets as of September 30. The balance of the assets is in six additional small plans.

Employer contributions to all funds during 1979 were $68 million and benefits paid out were $48 million.

Sperry manages $140 million internally, which consists of $40 million indexed and $100 million in fixed income. At the end of September 1978, the internal portion was $100 million.

Sperry retains 10 outside investment managers which remained unchanged during the year. They are: Connecticut General Life Insurance Co., Bloomfield, Ct.; Chase Manhattan Bank, and F. Eberstadt & Co., New York; John Hancock Mutual Life Insurance Co., Boston; Metropolitan Life Insurance Co. and Morgan Guaranty Trust Co., New York; T. Rowe Price Associates Inc., Baltimore; Thorndike, Doran Paine & Lewis Inc., Boston; Travelers Corp., Hartford; and Wells Fargo Investment Advisors, San Francisco.

The asset mix for the total fund was 40% equities, 9% fixed income, 38% guaranteed income contracts, and 13% cash equivalents.

Chase Manhattan is master trustee for Sperry and handles a market inventory fund as well.

Sperry has an "insignificant" portion of the assets invested internationally. The company does not use options or financial futures.

In July 1979 the company changed its name to Sperry Corp. from Sperry Rand Corp.

Raymond L. Colotti who was director, pension asset management, was promoted to staff vp-pension asset management at the end of the year. In addition to Mr. Colotti, the other key personnel involved with overseeing the investment management, and administration of the funds are A.J. Moccia, vice chairman and chief financial officer; and T.V. Hirschberg, staff vp-insurance.

Standard Oil of California

	($ millions)
Total assets	1,742
Employer contributions	122
Benefit payments	44

SAN FRANCISCO—Pension assets of Standard Oil of California increased by almost $470 million, 27% during the 12 months ended Sept. 30, 1979.

With total assets of $1.742 billion, the fund ranked 54th among the 100 largest fund sponsors. Among corporate funds in the *P&I* Top 100, Standard Oil of California ranked 27th.

The asset figure represents two funds, the pension plan with assets totaling $782 million, and employe stock/profit sharing plan trusteed by Crocker National Bank, San Francisco, with total assets of $960 million.

Other firms currently managing the fund are: Crocker Investment Management Corp., Equitable Life Assurance Society of the U.S., New York; George D. Bjurman & Associates, Los Angeles; Rosenberg Capital Management, San Francisco; Stralem & Co.; Bankers Trust Co. both New York; Harris Trust & Savings, Chicago; U.S. Trust Co. of New York; Brown Brothers Harriman & Co., New York.

The fund's asset mix includes 53% in stocks, 25% in bonds, 18% cash/equivalents and 3% in real estate. Standard Oil of California increased its real estate holdings in late 1979, with a goal of 10% involvement in real estate by the early 1980s, according to Robert L. Norman, manager, financial analysis.

None of the pension fund assets is managed internally, nor is any of the assets indexed, in guaranteed return contracts or invested in foreign markets.

Mr. Norman said foreign securities "are one area we'll look at after we complete the move to increase real estate holdings."

The fund does not use options or financial futures.

Frank Russell Co. acts as consultant to the fund and Bankers Trust Co. is the master trustee.

Key officials involved in administration of the funds are: H.W. Bell, vp, finance director; Sellers Strough, vp & comptroller; G.K. Carter, assistant comptroller and Mr. Norman, manager, financial analysis.

Standard Oil Co. (Ind.)

	($ millions)
Total assets	1,907
Employer contributions	189*
Benefit payments	85*

*estimates

CHICAGO—Standard Oil Co. (Ind.) increased its commitment to internal asset management in 1979, bringing another $27 million inhouse, which put the total at $166 million.

Pension assets of the fund increased over $400 million to $1.9 billion in the 12 months ending Sept. 30, 1979. The company's fund ranked 46th as of that date among the 100 largest fund sponsors. Among corporate funds in the Top 100, Standard Oil (Ind.) ranked 22nd.

The assets are split into three areas including a set of retirement plans with $1.02 billion, savings plans with $850 million and an ESOP with $30 million.

Investment management firms currently managing fund assets for Standard Oil (Ind.) include: Chase Manhattan, Equitable, Fayez Sarofim, First National Bank of Chicago, Forstmann-Leff Associates, Loomis Sayles & Co., National Bank of Detroit, State Street of Boston, Stein Roe & Farnham and U.S. Trust.

The fund has $73 million of its assets indexed, and, although no assets are listed in foreign markets, fund officials note that some $34 million is invested in foreign corporations, which are traded on U.S. exchanges.

The fund does not use options nor it is involved in the financial futures markets.

The fund has no master trustee and does not use an investment management consultant.

The approximate asset mix of the total funds as of Sept. 30, 1979 was 60.2% in stocks, 14.7% in bonds, 14.8% in cash/equivalents, 2.2% in real estate and 8.1% in other investment vehicles.

The key personnel involved in overseeing the fund are Philipp W. Binzel, general manager of fund investments and investor relations; and David E. Tierney, administrative manager of investments.

TIAA/CREF

($ millions)	
Total assets	14,366
Employer contributions	na
Benefit payments	285

NEW YORK—The combined assets of Teachers Insurance and Annuity Assn. and College Retirement Equity Fund (TIAA/CREF) were $14.366 billion as of Sept. 30, 1979, an increase of 17.5% over the end of 1978.

TIAA had approximately $7.975 billion in assets; CREF, $6.391 billion.

Among the Top 100 sponsors profiled by *Pensions & Investments*, TIAA/CREF ranked 2nd.

All of the investments are handled internally. Walter G. Ehlers, executive vp, heads TIAA. James S. Martin, executive vp, heads CREF. Mr. Martin was promoted during 1979 when he replaced Burt N. Dorsett who left to head Westinghouse Asset Management, the inhouse money management unit formed in 1979.

Benefits paid to retirees totaled $285 million in 1979.

As of September 30, TIAA had approximately $3.5 billion invested in bonds, $179 million in common and preferred stocks, $3.72 billion in mortgages, $387 million in real estate, and $72 million in short-term investments.

According to Mr. Ehlers, one of the major real estate transactions during the year was the purchase of the Seagram's building at 375 Park Avenue, New York, for $85 million. In 1978, TIAA purchased the building at 1166 Avenue of the Americas in conjunction with New York Telephone Co. The transaction was closed in 1979 and the building will be the headquarters of International Paper.

CREF had $6.391 billion invested in equities as of September 30. About $60 million of the total was in short-term cash equivalents at the end of September.

CREF had about $140 million in foreign investments at that time, up from $82 million at year-end 1978.

CREF does not use options or financial futures. No consultants are used.

The key personnel at TIAA/CREF are Mr. Martin, executive vp, CREF Investments; Mr. Ehlers, executive vp, TIAA Investments; Martin Cleary, senior vp, mortgage and real estate division; and Frank J. Pados, senior vp, securities.

Teamsters Central States, Southeast and Southwest Areas Pension Fund

($ millions)	
Total assets	2,021*
Employer contributions	497
Benefit payments	303

*estimate

CHICAGO—The second-largest Taft-Hartley pension fund in the nation saw its executive director resign in October and ended the year without a replacement being named.

John Dwyer resigned his post after 17 months.

With total assets of $2.021 billion, the fund increased its size by $315 million (10%) for the year ending Sept. 30, 1979 to rank it 41st among the Top 100, 2nd among the largest Taft-Hartley funds.

The limited growth in asset size was due primarily to the sale of real estate from the portfolio.

According to the fund's 5500 Report, about $395 million was in common stock from both non- and party-in-interest investments; $688 million in bonds and $706 million in real estate and mortgages. The fund also has $44 million in real estate properties it now operates as part of loan reorganizations.

This was a significant decrease from the $120 million listed as majority-owned companies at the beginning of the year on the fund's 5500 Report.

Real estate investments are handled by Equitable Life Assurance, New York and Victor Palmieri & Co., Los Angeles. Equitable is also master custodian.

Asset managers for the fund are Harris Trust and Savings, Chicago; Massachusetts Financial Services, Boston; Mellon Bank, Pittsburgh; Lazard Freres & Co., New York; Mercantile National Bank, Dallas; Chase Investors Management Corp., New York; and Equitable Life, State Street Bank & Trust Co., Boston, was named securities custodian. It replaces American National Bank, Chicago.

None of the stocks and bonds are managed internally, however, there is an inhouse real estate management staff which works with the two other property managers. No funds are invested overseas, in futures or in an options program or with a master trustee.

The current chief executive responsible for the fund is Jack Yarbrough, assistant executive director.

Tennessee Consolidated Retirement System

($ millions)	
Total assets	1,358
Employer contributions	137
Benefit payments	82

NASHVILLE—The Tennessee Consolidated Retirement System has temporarily halted its covered call options writing program "because premium levels have dropped to where it just wasn't worth the risk," according to H. Swift Lipscomb Jr., chief investment officer for the system.

He said the program designed to

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gain incremental income "was not viable" with the low premium levels. However, he said the system would begin writing options again if the premiums became more attractive.

He said he also is considering foreign investments, although the investment panel which oversees the fund "wasn't too enthusiastic."

"We have to find the right way to do it," he said. "I don't care much for index funds, but that may be the way to invest in foreign securities."

The retirement system had assets of $1.358 billion at the end of September 1979, compared with $1.040 billion the previous year, a 30.6% increase. The system ranks 68th in the Top 100 funds, and 30th among state and local funds.

The fund is invested 25% in stocks, 64% in bonds and 11% in cash and equivalents.

Also during the year, Rodney Everson, a bond portfolio manager, left to join Continental Illinois National Bank. He was replaced by Dewey Collins Jr. Dianne Bradberry is the executive assistant.

Texaco Inc.

	($ millions)
Total assets	1,670*
Employer contributions	113*
Benefit payments	45*

*estimate

WHITE PLAINS, N.Y.—*Pensions & Investments* estimates that the employe benefit assets of Texaco Inc. increased to $1.670 billion as of Sept. 30, 1979, up from $1.32 billion as of Dec. 31, 1978. The funds rank 55th among the 100 largest and 28th among corporate sponsors.

As of Dec. 31, 1978, the latest date for which the company could supply data, the group pension plan had assets of $964.1 million, the employe savings plan had assets of $338 million, and the employe stock ownership plan had assets of $16.3 million.

According to Texaco officials, the company made no changes in fund managers during 1979. Managers are: Aetna Life and Casualty, Hartford; American National Bank and Trust, Chicago; Equitable Life Assurance Society, New York; Harris Trust and Savings Bank, Chicago; Travelers Insurance Co., Hartford; and Manufacturers Hanover Trust, New York.

A large part of the assets are in insurance contracts. No assets are managed internally, and the company declined to comment on whether assets were indexed, invested in foreign markets or in financial futures.

It also declined to disclose the asset mix for the fund.

R. G. Brinkman, vp financial manager, and W. S. Barrack Jr., vp plan administration, are the key executives administering the investments.

Texas Employes Retirement System

	($ millions)
Total assets	1,113
Employer contributions	85
Benefit payments	51

AUSTIN—Pension assets at the Employes Retirement System of Texas increased by $134 million—14%—during the year ended Aug. 31, 1979.

Another notable change in the Texas pension system affecting all funds was the creation, as of June 18, 1979, of a State Pension Review Board. This board is charged with determining the soundness of the state municipal and local pension systems plus providing information and actuarial analysis of all pension fund proposals before consideration by the state legislature. The board will also recommend policy or practice changes and present a biennial report to the legislature.

With total assets of $1.113 billion, the system ranks 80th among the 100 largest fund sponsors. Among public pension funds the Employes Retirement System of Texas is ranked 35th.

The system includes only one plan and all assets are managed internally.

There are no indexed assets, no guaranteed investment contracts and no foreign investments—the latter are prohibited by law. The fund does not use options, financial futures or a master trustee.

The funds are controlled by a Board of Trustees and the State Treasurer who is custodian of the assets.

The approximate asset mix as of Sept. 30, 1979 was: stocks 14%, bonds 74% and cash and equivalents 12%.

E. F. Hutton continues to act as investment management consultant.

Joseph N. Murphy Jr., executive director; Preston G. Craig, director of investments and finance and A. Danny Boswell, assistant director of investmens and finance are the key personnel in overseeing the administration of the funds.

Teachers Retirement System of Texas

	($ millions)
Total assets	4,611*
Employer contributions	293
Benefit payments	274

*book value

AUSTIN—Assets for the state's largest retirement system increased by $529 million during the year ending Sept. 30, 1979.

Other changes saw a new state law enacted for public funds which created actuarial review procedures for all benefit increases. The legislation was considered a reaction to the possibility of any PERISA-type legislation.

With total assets of $4.611 billion the fund ranked 12th among the Top 100 and 6th among the municipal funds.

All of the funds assets are managed internally by a staff of 15 with the state treasurer holding all of the fund's securities.

During 1979 net money invested into the Fund (total contributions) amounted to $561 million.

As of September 30, 69% of the assets were held in bonds, 29% were in stocks and 2% were cash equivalents.

Duff & Phelps was listed as the system's primary investment management consultant.

No funds are indexed, in foreign markets, options, or GICs.

Key personnel responsible for the daily activity are Leonard Prewitt, executive secretary; Clark Manning, investment officer; Joseph Perrone, assistant investment officer, fixed income; and Henry Davis, assistant investment officer, research.

Union Carbide

	($ millions)
Total assets	1,400
Employer contributions	154*
Benefit payments	75

*estimate

NEW YORK—The internally-managed assets of the Union Carbide employe benefit plans increased $150 million to $450 million as of Sept. 30, 1979.

With total assets of $1.4 billion the company's fund ranks 66th among the 100 largest funds and 33rd among corporate funds.

The $1.4 billion excludes the

about $300 million assets of a retirement plan maintained for Carbide employes contracted to the Department of Energy.

Company officials said these assets were mainly in insured plans and were not administered by the company's investment department.

During the year Union Carbide added one new manager, Scudder, Stevens & Clark Inc.

The other managers for the fund are Manufacturers Hanover Trust, Metropolitan Life Insurance Co. and Mac Kay-Shields Financial Corp., all in New York, and Prudential Insurance, Newark, N.J.

Manufacturers Hanover is also the master trustee for the Union Carbide plans.

While the company writes options against a "minor" part of its equity assets, it does not use financial futures, guaranteed return contracts, index funds or international investing.

The company declined to provide the asset mix as of September 30.

James A. O'Connell, assistant treasurer, is responsible for the day-to-day administration of the investments.

United Air Lines

	($ millions)
Total assets	1,553
Employer contributions	176
Benefit payments	35

CHICAGO—It was the year of international investing at United Air Lines in 1979 as the pension fund appointed Lombard Odier, a Geneva-based money management firm, to act as manager for about $46 million of the fund assets.

Pension assets of the major air carrier increased $180 million last year bringing total assets to $1.553 billion as of Sept. 30, 1979.

The company's fund ranked 57th as of that date among the 100 largest fund sponsors. Among corporate funds, United Air Lines ranked 29th.

The pension assets are held in two plans. One is a defined benefit plan with $1.2 billion and the second is the Pilot Variable Plan with $350 million.

Plan assets are divided between several managers including: National Bank of Detroit; Lombard Odier, Geneva, Switzerland; John Hancock, Boston; Harris Trust, Chicago; Wertheim, MacKay Shields, Fischer, Francis, Trees & Watts, Jennison Assoc., all of New York; Batterymarch, FMR, Pioneering Capital Management, all of Boston; Wells Fargo, Crocker, both of San Francisco; Connecticut General of Hartford; Stralem Co. of New York; Founders Capital Management Co. of Denver; Lincoln Capital Management, Chicago and Trust Company of the West, Los Angeles.

None of the assets is managed internally. The fund has 3% of the assets indexed and about 3% in foreign markets. None of the assets is in financial futures, optioned or in GICs.

The master trustee for the fund is the Harris Bank and Trust Company of Chicago, and Frank Russell Co., Seattle acts as the investment management consultant.

The approximate asset mix of the total funds is 55% in stocks, 42% in bonds and 3% in other areas.

Fund officials requested key personnel not be included in the profile.

United Nations Joint Staff Pension Fund

	($ millions)
Total assets	1,950
Employer contributions	240
Benefit payments	125*

*estimate

NEW YORK—The United Nations Joint Staff Pension Fund had pension assets of approximately $1.95 billion as of Sept. 30, 1979, an increase of 18% over one year ago.

With $1.95 billion in assets, the United Nations fund ranks 43rd among the Top 100.

The pension assets are in a single fund. Gross contributions, including employer and employe, were about $240 million in 1979. Net contributions, including income, were approximately $210 million.

The U.N. fund retains two outside advisers: Citibank, N.A. and Fiduciary Trust Co. of New York. Citibank acts as adviser for assets invested in U.S. equities.

Fiduciary Trust acts as adviser for U.S. securities as well as for the $775 million invested in non-dollar denominated securities, both equities and fixed income.

The U.N. fund uses a mixed management approach. Although two outside advisers are retained, investment decisions involve the U.N. investment committee as well as the office of the controller with its internal investment group. E. Charles Stockmar and Timothy P. Prince, both senior investment officers, head up the internal investment group.

None of the assets is indexed, or invested in guaranteed investment contracts. The fund does not use options or financial futures.

The approximate asset mix for the fund as of September 30 was 51% stocks, 40% bonds, 4% real estate and 5% cash equivalents. The real estate portion is in pooled equity and trust accounts.

Each adviser acts as custodian for the portion of the assets for which it is adviser.

Callard, Madden & Associates, Chicago, acts as consultant.

Mr. Stockmar and Mr. Prince are assisted by a staff of three.

U.S. Steel and Carnegie Pension Fund

	($ millions)
Total assets	4,700
Employer contributions	365*
Benefit payments	400*

*estimate

NEW YORK—The U.S. Steel and Carnegie Pension Fund, with assets of $4.7 billion as of Sept. 30, 1979, ranked 11th among the 100 largest funds and 5th among corporate funds.

Fund officials estimate contributions at $365 million and benefit payments at $400 million for the year.

The entire fund is managed internally by Graham O. Harrison, president, and John Van Deusen, vp-investments, aided by a staff of 23.

None of the assets is indexed, and the fund does not use financial futures to hedge its investments.

However, it has "more than $150 million" invested in foreign markets and has been making such investments since 1962.

The fund also writes options against a "minor" part of its equity holdings. The fund also has more than $200 million in real estate.

Among the largest equity holdings at the end of September, according to the 13F Reports compiled by CDA Inc., were $160 million of Schlumberger Inc., $135 million of IBM and $86 million of Texas Oil and Gas Corp.

Mr. Harrison declined to specify the fund's asset mix.

The fund uses no master trustee and no consultant, and none of the assets is in GICs.

United Technologies Inc.

	($ millions)
Total assets	1,950
Employer contributions	120
Benefit payments	59

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HARTFORD, CT.—Though United Technologies committed itself to international investing more than a year ago, and hired the Dresdner Bank in Germany to manage the assets.

Dresdner still has not received any funds.

According to United Technologies, the implementation of international investing has been delayed by Securities & Exchange Commission requirements concerning the bank.

During the year United Technologies' assets increased by some $250 million to $1.95 billion, and the company's funds rank 43rd among all funds and 20th among corporate sponsors.

Of the assets, some $1.23 billion are in insured plans with Connecticut General Life Insurance, Great West Life Insurance, Metropolitan Life Insurance Co., Prudential Insurance Co., and The Travelers Corp.

The remainder is managed by Bankers Trust Co., New York; Brown Brothers, Harriman, New York; The Boston Co.; Capital Guardian Trust, San Francisco; Connecticut Bank & Trust, Hartford; Hartford National Bank; T. Rowe Price, Baltimore; Putnam Advisory, Boston, and Wertheim Asset Management, New York. During the year MacKay Shields was dropped, and replaced by T. Rowe Price.

The major United Technologies plans are the UTC-Non-Represented Plan, with assets of $1,064 million, and the UTC Represented Plan, with assets of $350 million.

None of the assets is managed internally, and United Technologies does not use options or financial futures.

However, $78 million is in an index fund.

The assets are 28% in equities, 3% in bonds, 6% in cash and equivalents, and 63% in insured plans.

Citibank is the master trustee for the plans.

The key executives involved in the day-to-day administration of the plans and their assets are Joseph A. Biernat, vp and treasurer, Charles Lard, assistant treasurer of pension investments, and Raymond L. Willis, assistant treasurer of employe benefits.

Virginia Supplemental Retirement System

	($ millions)
Total assets	1,510
Employer contributions	130
Benefit payments	116

RICHMOND—The Virginia Supplemental Retirement System had assets of $1.51 billion at the end of September 1979, as compared to $1.32 billion the previous year. The public pension fund ranks 59th among *Pensions & Investments'* Top 100 funds, and 26th among public funds.

The fund is invested 52.4% in bonds, 30.6% in stocks, 10.9% in cash and equivalents and 6.1% in other investments.

The money managers for the Virginia system are Bank of New York; The Boston Co. Institutional Investors; Massachusetts Financial Services and Putnam Advisory Co., all Boston.

About $841.6 million of the funds assets is invested internally, mostly in fixed-income.

This is up by about $25 million from last year.

Glen D. Pond is director of the retirement system.

Robert H. Daniel is the investment officer, Jacquelin Davison, inhouse portfolio manager and Lawrence B. Whitlock Jr., inhouse assistant portfolio manager.

Washington State Finance Committee

	($ millions)
Total assets	2,750
Employer contributions	372*
Benefit payments	201

*June 30, 1979

OLYMPIA—The Washington State Finance Committee registered a $675 million—31%—increase in pension fund assets for the 12 months ended Sept. 30, 1979.

The total assets of $2.750 billion ranks the state fund 24th among the 100 largest fund sponsors as of the above date and 15th among the government funds in the *P&I* Top 100.

The three largest retirement funds represented in the asset figure are the state employes with $1.4 billion, teachers with $1 billion, and law enforcement officers and firemen with $350 million.

As of June 30, 1979, the state contributions were $160.5 million for state employes, $131.6 million in the teachers fund and $80 million to the law enforcement officers and firemen.

The 1979 benefits paid to retirees was $101.2 million to state employes, $77 million to teachers and $22.2 million to law enforcement and firemen.

As of Jan. 1, 1980, the fund had six investment management firms which handle equities only: Loomis Sayles & Co., Batterymarch Financial Management Inc., Columbia Management Co., Eagle Management & Trust Co., Pringle, Flinn, Elvins & Donahoe Inc. and Torray Clark & Co. Scudder, Stevens & Clark was dropped during the year.

Internally managed assets increased by almost 49% over last year to almost $2.4 million.

There are no assets in guaranteed investment contracts or foreign markets— the latter is prohibited by state law.

Call options are written against equity holdings for about 20% of the $250 million indexed fund.

Financial futures are not utilized as an investment medium, nor is there a master trustee or an outside consulting firm.

The asset mix of the funds as of the end of September was 24% in stocks, 35% in bonds, 11% in cash and equivalents and 30% in real estate mortgages/long term fixed income securities.

The key administrators are James Hitchman, executive secretary and Dave Lodefink, state investment officer.

The Western Conference of Teamsters Pension Trust Fund

	($ millions)
Total assets	2,600
Employer contributions	303
Benefit payments	354

SEATTLE—The Western Conference of Teamsters this year tapped Joseph Ballew as the first executive director of its pension fund, ending a tradition of contracting managerial assistance from outside the union.

In addition, Old National Bank of Washington was added as a manager.

Pension assets of the nation's largest union fund increased 18% during the 12 months ended Sept. 30, 1979.

With total assets of $2.600 billion, the union's fund ranked 26th as of that date among the 100 largest fund sponsors. Among union funds in the Top 100 the Western Conference pension fund ranked 1st.

Fully 85% of the fund's assets is in guaranteed investment contracts with the Prudential Insurance Company.

Old National Bank is the fund's only other investment manager.

As of September 30, the asset mix was 11.1% in equities, .8% real estate, .01% "other," 85% in GICs and the remainder in cash equivalents.

None of the assets is managed internally, nor is any of the assets indexed. The fund does not invest overseas or write options against equity holdings. Financial futures are not used.

The fund also does not use an investment management consultant.

In addition to Mr. Ballew, key fund executives are Norman C. Pixler, chairman of the board of trustees, and Joseph M. Edgar, co-chairman of the board of trustees.

Western Electric Co. Inc.

($ millions)

Total assets	4,828
Employer contributions	458
Benefit payments	134

NEW YORK—The employe benefit assets of the Western Electric Co. increased by 22% between Oct. 1, 1978 and Sept. 30, 1979.

With employe benefit assets of $4.8 billion, Western Electric ranks 10th among the sponsors of the 100 largest employe benefit operations. It ranks 4th among corporate funds.

The $4.8 billion includes the assets of the Western Electric pension plan, the Teletype Corp. pension plan, and the Nassau Recycle Corp. plan.

The managers for the funds remained virtually unchanged during the year, with no additions and only one deletion. Fidelity Union Trust of Newark, N. J., was dropped.

The current managers are: David. L. Babson & Co., Boston; Chemical Bank, and Citibank, New York; First National Bank in Dallas; First National Bank of Boston; Harris Trust, Chicago; Manufacturers Hanover Trust and Morgan Guaranty, New York; Prudential Insurance Co., Newark, N.J.; Scudder, Stevens & Clark, New York, Standish, Ayer & Wood and Thorndike, Doran, Paine & Lewis, Boston; Wells Fargo Investment Advisors, San Francisco; and First National Bank of Chicago and Northern Trust, Chicago.

In addition, "more than $200 million" is managed internally in a fixed-income account.

Wells Fargo Bank manages an index fund for Western Electric, but the company declined to say how much of its assets is indexed.

According to David H. Olin, "we are participating in foreign markets through various commingled funds and some individual issues selected by some of our investment managers. These include both debt and equity securities."

The fund does not use options or financial futures as part of its investment strategy.

Currently the fund is 50% in common stocks, 38% in bonds and 12% in cash and equivalents. It also has a small amount in real estate through Prudential's PRISA and other commingled funds.

While the fund uses no master trustee, Chase Manhattan is a directed trustee for the assets managed by investment counselors.

In addition to Mr. Olin, R. E. Shultz and W. C. Foster are involved in the day-to-day administration of the fund.

Westinghouse Electric Corp.

($ millions)

Total assets	1,800
Employer contributions	185
Benefit payments	110

PITTSBURGH—Westinghouse began running money internally this year through its new investment management subsidiary, Westinghouse Pension Investments Corp. Burt N. Dorsett, former executive vp of the College Retirement Equities Fund, was selected to head up the new firm, and the company slated $300 million for the investment management firm.

Pension assets at Westinghouse leaped 28% during the 12 months ended September 30, 1979.

With total assets of $1.8 billion, the company's fund ranked 51st as of that date among the 100 largest fund sponsors. Among corporate funds in the *P&I* Top 100, Westinghouse ranked 25th.

Fully 25% of the funds assets are now managed internally with its investment subsidiary.

None of the assets, however, is indexed. In addition, the fund has the following managers: Chase Investors Management, Morgan Guaranty, Marine Midland, Citibank, Stralem & Co. Inc., Equitable Life, Manufacturers Hanover, Merrill Lynch Hubbard, all of N.Y.; Mellon Bank, Pittsburgh; Putnam

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Advisory, Boston; First of Chicago; Provident National Bank, Philadelphia; and Andrecom Advisors, Deerfield, Ill.

As of September 30, the asset mix was 30% stocks, 50% bonds and 20% cash/equivalents, according to fund officials.

The company has no money in GICs or foreign markets, and does not write options or use financial futures.

Mellon Bank serves as master trustee.

The key executives responsible for the administration of asset management are Thomas Gudiness, director of pension funds; and Harry F. Murray, vp, pension investments and investor relations.

Wisconsin Investment Board

	($ millions)
Total assets	4,229
Employer contributions	281.7
Benefit payments	138.2

MADISON—Pension assets of the Wisconsin Investment Board increased by 15% to $4.229 billion during the 12 months ended Sept. 30, 1979.

The state fund ranked 17th as of that date among the 100 largest fund sponsors.

Among public funds in the Top 100, the Wisconsin Investment Board ranked 10th.

The investment board manages all money internally.

Included in that administration is the fixed retirement trust fund, with $3,548 million in assets as of September 30, and the variable retirement trust fund, with $681 million as of the same date, according to fund officials.

The board has no assets indexed or in guaranteed investment contracts.

The board has no assets invested overseas, but does hold $164 million of Canadian bonds, a reduction from last year's holdings, a spokesman said.

No options are written against the equity holdings, and financial futures are not utilized.

The board does not use a master trustee or investment management consultant.

The asset mix for the board, as of September 30, consisted of 33% stocks, 29% bonds, 15% cash equivalents, 5% mortgages and other real estate, and 18% private placements.

The key executive responsible for the administration of asset management is James M. LaFleur, executive director.

Funds use 171 advisers for assets

NEW YORK—The sponsors of the 100 largest employe benefit systems employed 171 different investment management organizations to invest their assets in 1979—an 11% increase over 1978.

The increase in the number of managers used appears to be a function of two trends in the Top 100, a decline in the number of state and local government funds represented in it, and slightly greater diversification of management among the corporate funds represented.

There were three more corporate funds in the Top 100 this year than last year, and three fewer public funds.

As corporate funds generally use outside managers more than public funds, this led to more managers being employed by the Top 100.

At the same time, there did appear to be greater diversification of manager, especially among the corporate funds.

For example, several international investment management firms appear among the managers for the first time this year, including Fidelity International (GT&E), GT Capital Management Corp. (Atlantic Richfield and GT&E), Rowe-Price Fleming International (GT&E), and Warburg Investment Management International (Armco, Atlantic Richfield and GT&E).

At the same time, there was an increase in internal management among the Top 100. Last year 34 of the systems used internal management for all or part of their assets. This year 37 used it.

General Telephone & Electronics used the most outside managers—30—having added eight by the end of the year, but Rockwell International used 24, Boeing used 21, Lockheed Pacific Telephone and Aluminum Co. of America used 19 each.

Morgan Guaranty Trust had the most clients among the top 100, 23, one fewer than last year, followed by Bankers Trust with 20.

Chase Investors Management had 15 clients among the Top 100, Harris Trust had 14, as did Scudder, Stevens & Clark, Fayez Sarofim and Brown Brothers, Harriman.

Among insurance companies, Prudential and Equitable both had 13 Top 100 clients.

Aetna Capital Mgt.
American Airlines, Boeing, Eastman Kodak, General Dynamics, Gulf Oil, McDonnell-Douglas, Phillips Petroleum, RCA, Rockwell International, Texaco, Shell Oil

Alliance Capital Mgt.
Atlantic Richfield, Boeing, Chrysler, Detroit Retirement Systems, Ford Motor, Hughes Aircraft, International Harvester, Iowa Retirement Systems, Kentucky Teachers Retirement System, New York City Retirement Systems, New York City Teachers, New York State Employes, Ohio Police & Fire

American Fletcher Natl. Bank
International Business Machines

American National Bank (Chicago)
Eastman Kodak, New York Telephone, Texaco

Ameritrust (Cleveland)
Aluminum Co. of America, Michigan Bell

Analytic Investment Mgt.
General Telephone & Electronics

Andrecom Advisors
Westinghouse Electric

David L. Babson
Bell of Pennsylvania, Connecticut State Funds, IBM, Oregon Public Employes, Western Electric

BA Investment Mgt.
Chrysler, General Motors, General Dynamics, Lockheed, Pacific Telephone

Bankers Trust
Bell of Pennsylvania, Bell Savings Plan, Boeing, DuPont Thrift Plan, GT&E, General Motors, General Dynamics, Hawaii Employes, IBM, International Harvester, Lockheed,

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